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***The Role of Emotion Regulation and Internal Ageism  
On Adjustment and Satisfaction with Retirement.***

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**Doctorate in Clinical Psychology**

**The University of Edinburgh**



**May 2016**

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## **DClinPsychol Declaration of Own Work**

Name: Blanca Ramirez-Ruiz

Title of Work: The role of emotion regulation and internal ageism on adjustment and satisfaction with retirement

I confirm that this work is my own except where indicated, and that I have:

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- ✓ Referenced and put in inverted commas any quoted text of more than three words (from books, web, etc.)
- ✓ Given the sources of all pictures, data etc. that are not my own
- ✓ Not made undue use of essay(s) of any other student(s), either past or present (or where used, this has been referenced appropriately)
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- ✓ Acknowledged in appropriate places any help that I have received from others (e.g. fellow students, technicians, statisticians, external sources)
- ✓ Complied with other plagiarism criteria specified in the Programme Handbook
- ✓ I understand that any false claim for this work will be penalised in accordance with the University regulations

- ✓ Received ethical approval from the School of Health in Social Science, University of Edinburgh

**Signature**

A handwritten signature in black ink, appearing to be 'JR' or similar, enclosed in a faint rectangular box.

**Date** 13/05/2016



*“For it is in giving that one receives”*

*“This is for you mum for giving me all and for you Alba for bringing so much love into my life.”*

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## **Thesis Preface and Structure**

This thesis follows the portfolio format and constitutes part-fulfilment of the degree of DClinPsychol at the University of Edinburgh.

The first abstract outlines a summary of the entire thesis. The thesis contains two chapters. The first chapter is a systematic review that focuses on the impact of emotion regulation strategies upon the wellbeing of older people. The second chapter presents an empirical paper which explores the role of emotional regulation strategies and attitudes to ageing in adjustment and satisfaction with retirement. Both sections follow the general content guidelines for publication in American Psychological Association journals. The systematic review is written for publication in the journal *Clinical Psychology Review*. The empirical paper is written for publication in the journal *Age and Aging*. However, the full adaptation into the shape of a journal article would require adjustments in formatting, which, at this point, would impact on the readability of this piece of work. The thesis portfolio concludes with an appendix section and a separate reference list for the whole thesis.

## **Thesis abstract**

### **Objectives:**

This thesis includes two distinct pieces of work. The purpose of the systematic review was to address a gap in the literature by examining available evidence relating to the use of Emotional Regulation (ER) strategies (avoidance, problem solving, reappraisal, rumination, and suppression) on the wellbeing of older people. The empirical paper aimed to examine the role of ER strategies and ageism on adjustment and retirement satisfaction. It also sought to examine the impact of other contextual factors such as financial status, health, and social support on retirement wellbeing.

### **Methods:**

A systematic review of cross-sectional studies examining a quantitative association between one aspect of ER (avoidance, problem-solving, reappraisal, rumination and /or suppression) and a self-reported quantitative well-being measure was completed via a comprehensive literature search of electronic databases. Studies were included if the participants were 60 years or older and without cognitive impairment. Wellbeing was explored in a broader way not only including measures of the absence of illness but positive constructs such as positive affect, positive social relations or autonomy. In the empirical study, participants completed a postal survey which included ER strategies, attitudes to ageing, adjustment and satisfaction with retirement and contextual factors such as financial status, health and social support. A series of hierarchical multiple regression analyses were conducted to examine the independent contributions of ER strategies and attitudes to aging to adjustment to, and satisfaction with, retirement.

## **Results:**

Twenty studies met inclusion criteria for the systematic review. The relationship between life satisfaction, positive emotion and ER was explored by four studies while nineteen out of twenty studied the relationship between ER and anxiety and depression. Only a conclusion about ER and negative mood measures could be made given the scarcity of research examining the association between ER and positive psychological concepts. Rumination was found to be the ER strategy most strongly associated with symptoms of anxiety and depression in OP population, while mixed results were found for avoidance, problem solving, suppression and reappraisal. Findings from the empirical study indicated that traditional predictors of adjustment (wealth and health) accounted for 12% of the total variance in outcome. Problem-solving was the strongest variable in the model explaining 24% of the difference in adjustment. Interestingly, the retirees who reported not having used problem-solving as a mechanism to cope with retirement were the most adjusted. Regarding satisfaction, retirees tended to experience higher retirement satisfaction if they had a greater level of self-rated mental health and increased access to household income (explained 14% and 9% of the total variance respectively). However, retirees who reported high levels of rumination experienced lower retirement satisfaction (rumination accounted for 8% of the total variance). Ageism was not a predictor of retirement adjustment or satisfaction.

## **Conclusions:**

According to the systematic review, rumination seems to be the ER strategy most strongly associated with symptoms of anxiety and depression in OP population. This finding was consistent despite the heterogeneity of the studied populations and a variety of outcome measures. Further research is needed to explore the impact of ER strategies on measures of

physical health and wellbeing in OP. The results of the empirical paper support the role of traditional predictors (wealth and health) in satisfaction and adjustment with retirement. The retirees who adjusted better to retirement were those who did not use problem-solving as a strategy to confront retirement. Retirees who reported high levels of rumination experienced lower retirement satisfaction. Ageism did not predict retirement satisfaction or adjustment. These findings are discussed in the context of retirement planning and successful ageing.

# Chapter 1: Systematic Literature Review

## Emotion Regulation Strategies in Older People: A Systematic Review

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Written in accordance with the instructions for authors for the Clinical Psychology Review



## **Abstract**

Emotion regulation (ER) has been identified as an important factor influencing psychological and health problems in adult populations. The purpose of this systematic review was to address a gap in the literature by examining available evidence relating to the use of ER strategies (avoidance, problem solving, reappraisal, rumination, and suppression) on the well-being of older people. A systematic search for peer-review articles published from 1985 was conducted in PsycINFO, CINAHL, Medline, Psychological and Behavioural Sciences Collections and ASSIA and resulted in 1746 titles. Twenty studies met full inclusion criteria (the cross-sectional association between well-being and ER was reported, participants were 60 years or older, without cognitive impairment and the article was written in English, Portuguese or Spanish). The relationship between life satisfaction, positive emotion and ER was explored by four studies while nineteen out of twenty studied the relationship between ER and anxiety and depression. Only a conclusion about ER and negative mood measures could be made given the scarcity of research examining the association between ER and positive psychological concepts. Rumination was found to be the ER strategy most strongly associated with symptoms of anxiety and depression in OP population, while mixed results were found for avoidance, problem solving, suppression and reappraisal. Questions for future research on ER and wellbeing in older people are proposed.

## Introduction

The question “How should we manage our emotions?” has dominated much of Western as well as Eastern philosophy for millennia and, by the late 20<sup>th</sup> century, became a topic of systematic scientific research (Gross, 1998). However, the concept of Emotion Regulation ER has generated many controversies. Some authors argue that the construct has been applied to such a range of diverse phenomena that there is doubt about its viability as a scientific construct. One of the main points of discussion is the difficulty to separate ER from the construct of emotion. Some authors propose that emotion and emotion regulation cannot be dissociated from one another but they interact at all phases of their generation, manifestation and termination. The second related issue is that ER can denote two types of regulatory phenomena: emotion as regulating and emotion as regulated. The third issue refers about whether the term ER refers only to optimal functioning or includes also maladaptive ER. The final question that complicates the understanding of ER is related to the fact that emotions are only understood in context (for a comprehensive discussion see Cole, Martin, & Dennis 2004; Campos, Frankel, & Camras, 2004).

An additional complication is that there is not gold standard for measuring ER. Examples of inventories intended to be applicable in general populations include the Ways of Coping (Folkman & Lazarus 1980, 1988); the COPE (Carver et al. 1989); and the Emotion Regulation Questionnaire (Gross & John, 2003). As pointed by Folkman and Moskowitz, (2004) the inventory approach has many limitations including unreliability of recall, confounding of items with their outcomes and variations in the recall period. Narrative approaches are helpful in understanding what a person is coping with and are also useful for

uncovering ways of coping that are not included on inventories. However, without the prompt of a checklist, people may overlook some of the ways they manage to regulate their emotions.

In an attempt to clarify the conceptual and definitional chaos that characterizes emotion research Gross wrote his seminal paper in 1998 (Gross, 1998a). The author proposed a working definition of ER as the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these motions. Emotions arise when a person attends to and appraises a situation as being significant. The degree of perceived significance determines the magnitude of the emotional response, as well as its urgency (Campos et al., 2004) These emotions can involve changes in the domain of thoughts, behaviour and/or physiological experience. Functional approaches to emotion argue that emotions evolved to help solve problems associated with environmental threats and demands (Lazarus, 1993). Both emotion and ER go beyond the immediate present and deal with the problems of existence and adaptation to the constructed past, the attributed present, and the predicted future. (Campos et al., 2004). Emotion regulatory goals can be framed at varying levels of abstraction, from the specific, such as not letting friends see one's amusement at their bawdy jokes, to the general, such as behaving in a loving way toward others. The main difference between coping and ER is that ER also includes non-conscious processes and can function on a continuum from conscious, effortful to unconscious, effortless, and automatic regulation (Gross, 1998, Folkman and Moskowitz, 2004 ).

ER is attained by a plethora of behaviours and cognitions and indeed we could name hundreds of activities that could count as part of ER, from playing calming music after a long day at work to thinking of positive aspects of a relationship breakdown. Gross (2014)

clustered all of these ER processes and grouped into five categories: situation selection, situation modification, attention deployment, cognitive change and response modulation. ***Situation selection*** refers to approaching or avoiding certain people, places or object to regulate emotions. Examples include the efforts to decrease anxiety by a shy person by avoiding social interactions or picking up the phone to call a friend when feeling sad. ***Situation modification*** involves active efforts to modify the situation directly to alter its emotional impact. Problem-solving responses will fall into this category as they constitute conscious attempts to change a stressful situation or contain its consequences. Rumination or brooding is classified under the ***attentional deployment*** emotion regulatory processes, as it has the aim of moving the attention away from the immediate situation by directing it toward feelings and their consequences. ***Cognitive change*** refers to modifying how one appraises a situation so as to alter its emotional significance. Reappraisal, which is often used to decrease negative emotions, falls into this category of ER processes. Finally, the fifth class of ER processes is ***response modulation***, which refers to directly influencing behavioural, experiential or physiological components of the emotional response. Expressive suppression, in which a person tries to inhibit on-going negative or positive emotion-expressive behaviour, is a common form of response modulation.

How well people regulate their emotions is tied to emotional well-being and it seems that older people (OP) are more efficient in the use of ER strategies than younger people (Gooding, Hurst, Johnson, & Tarrier, 2012; Hunt, Wisocki, & Yanko, 2003; Phillips, Henry, Hosie, & Milne, 2006). This finding has been related to motivational changes instigated by perceived constraints on time left in life that lead to a prioritisation of meaningful emotional goals (Carstensen, Fung, & Charles, 2003). It also seems that the type of ER strategies used

varies according to age. For example, Amirkhan and Auyeung (2007) showed that problem-solving increases with age while avoidance decreases. Blanchard-Fields and Coats (2008), found that OP used fewer proactive and more passive ER compared to a younger age group. Interestingly, contrary to the stereotype of older age being associated with depression and despair, cross-sectional investigations suggest that the experience of negative emotion decreases with age (Grühn, Kotter-Grühn, & Röcke, 2010; Stone, Schwartz, Broderick, & Deaton, 2010), a finding upheld in longitudinal studies (Carstensen et al., 2011). Findings from larger surveys exploring positive affect showed a U-shaped age profile function, with increasing positive affect among people over 50 years old (Grühn et al., 2010; Stone et al., 2010). Socioemotional selectivity theory posits that greater emotional saliency in OP and the desire to maintain emotional well-being explains age-related strengths in well-being (Carstensen et al., 2003).

An important aspect of the research on ER has been its relation to *psychological problems*. Some ER strategies have been traditionally associated with greater levels of psychological difficulties (*maladaptive strategies*). Conversely, other ER strategies have been found to have inverse associations with clinical symptoms (*adaptive strategies*). In a meta-analysis by Aldao, Nolen-Hoeksema, and Schweizer (2010), the authors found that rumination and suppression were correlated with greater symptoms of depression and anxiety. In contrast, positive reappraisal, problem-solving and acceptance were negatively related to psychopathology, but the relationships were weak and inconsistent. Dickens et al., (2011) found that people with long-term conditions who used suppression and avoidance of thoughts more frequently were more likely to have depression. On the other hand, individuals'

tendencies toward positive reappraisal have been positively related to mental health and life satisfaction (Windsor, 2009).

Similar results have been found in the context of physical health in studies including OP participants affected by cancer, stroke or undergoing haemodialysis treatment (Gillanders, Wild, Deighan, & Gillanders, 2008; Gillen, 2006; Schroevers, Kraaij, & Garnefski, 2011). However, the central problem of these studies is the inclusion of participants with a wide age range from 19 and 87 years old. Therefore, it is hard to know whether the differences in well-being are the result of cohort effects, developmental trends across the life span or indeed the use of different ER strategies. Nowlan, Wuthrich, and Rapee (2015) conducted a systematic review exploring the impact of positive reappraisal in the elderly. The authors concluded that positive reappraisal was an adaptive coping strategy for OP, particularly in the context of physical illness. However, this study has two important limitations. Firstly, the search was limited to one database (PsycINFO). The second and main limitation is again the inclusion of studies with populations with an age range from 24 to 104 years old.

Given conflicting results within the literature and difficulties in drawing a conclusion from single studies with methodological limitations, the aim of the current study is to undertake and present the results of a systematic literature review, which critically appraises the available evidence relating to the use of ER strategies on the well-being of OP. A broader selection of databases will be searched, to overcome some of the limitations noted above, and the focus will be on participants over 60 years of age. Following the study of Aldao et al., (2010), the following strategies will be reviewed: avoidance; problem solving; reappraisal;

rumination and suppression. We have consciously excluded acceptance since it represents the opposite pole of avoidance (which has already been included).

The definition of well-being remains largely unresolved. Although historically the study of wellbeing accentuated constructs such as happiness and positive affect, the field has been dominated by a restricted view of well-being as “an absence of distress and dysfunction”. In the last ten years, the area of well-being has expanded, and clinical psychology included positive psychological concepts beyond the quality of life such as engagement, flourishing meaning and relationships (Dodge, Daly, Huyton, & Sanders, 2012). Given than the most common measures to explore retiree psychological well-being are mental illness measures (Diener, & Seligman, 2004), these will be included in this investigation together with positive terms (psychological well-being, life satisfaction and quality of life).

## **Methods**

### **Inclusion Criteria**

1. Cross-sectional studies examining a quantitative association between one measure of ER (avoidance, problem-solving, reappraisal, rumination and /or suppression) and a standardized self-report quantitative well-being measure.
2. Studies in which participants' age was 60 years old or over.
3. Studies published in peer-reviewed journals in the English, Spanish or Portuguese language were included; Dissertations and other grey literature were excluded.

## **Exclusion criteria**

1. Studies including samples of cognitively impaired individuals were excluded as self-report questionnaires require recent recall abilities.
2. Treatment studies of clinical disorders such as anxiety and depression were excluded as the focus of the review was on well-being.

## **Literature Search Strategies**

As a preliminary step, the Cochrane Database of Abstracts of Reviews of Effects (DARE) was searched to determine whether a similar review had been undertaken recently. For the purpose of the present review, a literature search for peer-reviewed publications was conducted in the following electronic databases: PsycINFO, CINAHL, Medline, Psychological and Behavioural Sciences Collection and ASSIA. Systematic searches for articles published between 1985 to November 11, 2015, were conducted. The year 1985 was chosen as a beginning point because there was little work on what is now referred to as ER prior to mid-1980s (Gross, 2014).

The keywords that were used referred to the population (*older people*), outcome (*well-being related*) and independent variable (*at least one aspect of ER*). Specifically, a combination of these terms (see Table 1) was searched within the domains of title, abstract, and keywords. Following search completion, titles and abstracts were initially screened to eliminate studies not meeting the inclusion criteria. The remaining studies were read in full to determine appropriateness for inclusion.



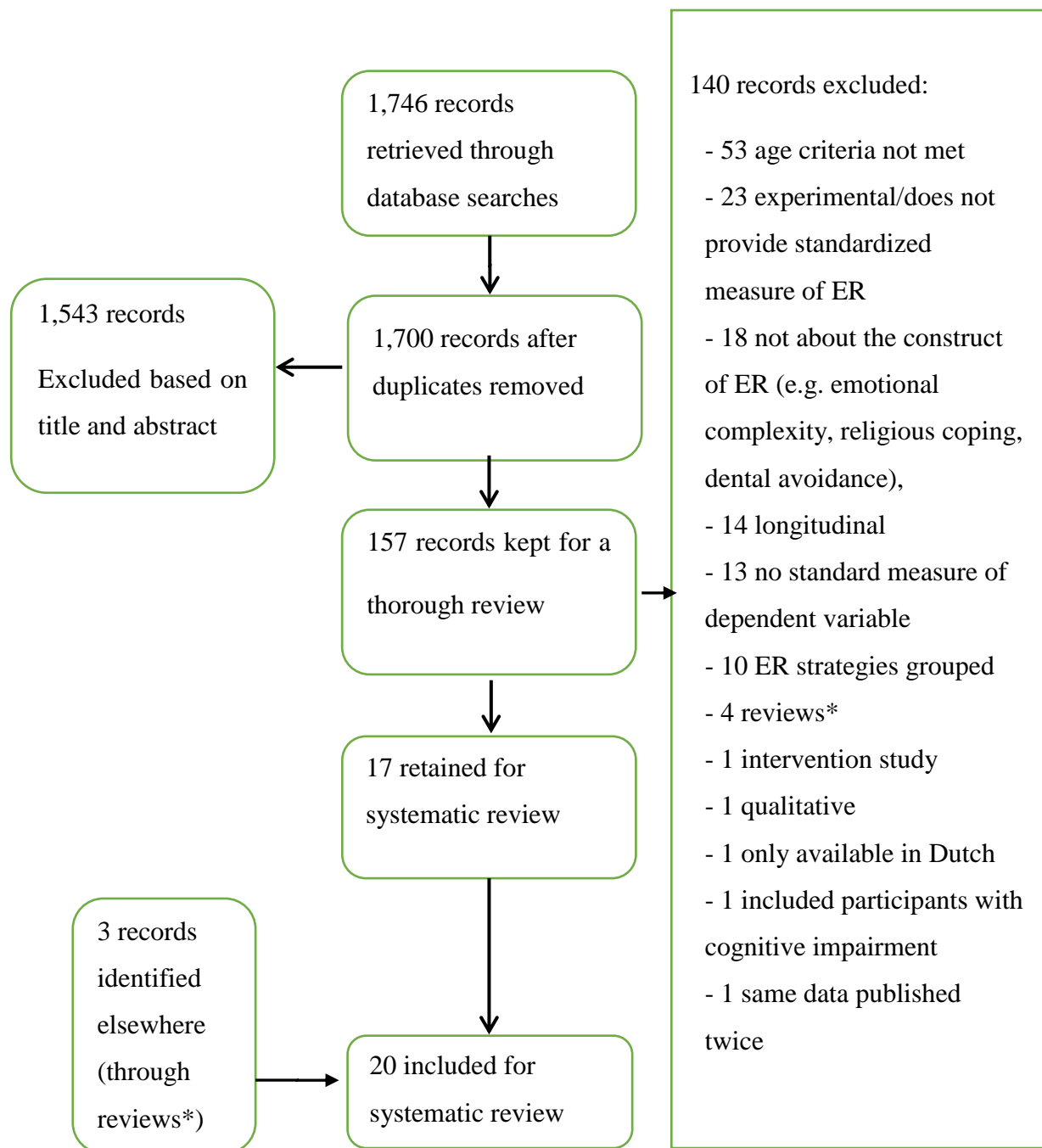
Table 1.

Terms used for the database search

<i>Population</i>	older OR geriatric OR “late life” OR retire* OR senior* OR elderly or elder OR ageing or aging
<i>Well-being outcome</i>	“well-being” OR “wellbeing” OR “life satisfaction” OR “quality of life” OR mood OR anxiety OR depression OR depressive OR affect* OR stress
<i>Independent variable (ER)</i>	“problem-solving” OR “problem-solving” OR brooding OR rumination OR suppression OR avoidance OR reappraisal OR re-appraisal OR “positive reframing” OR “positive reinterpretation” OR “emotional regulation” OR “emotion regulation.”

Electronic databases were searched on 7<sup>th</sup> August – 15<sup>th</sup> October 2015, with a return of 1746 studies. The flow of the literature review process is illustrated in Figure 1.

Figure 1. Systematic search process



## Results

### Characteristics of Included Studies

Table 2 provides a summary of the descriptive characteristics, assessment methods of ER and well-being and the key findings of the 20 studies listed in this review.

Table 2. Descriptive information for studies included in the systematic review

Study; Country	Participant characteristics/ Recruitment	N	Age range (years)  M (SD)  Female %	Emotion regulation  measures	Well-being  measures	Analysis design	Key findings
Andrew and Dulin, 2007; New Zealand	Individuals 70- years-old and over and living in their home or a retirement village.  Research advertised in local newspaper and through flyers.	195	70-90+;  M = NS; SD = NS  67.3%	AAQ	-GDS-SF  -GAI  -SRH  -FI	Correlation  Regression	<p>Experiential avoidance correlated positively with depression (<math>r = 0.37</math>, <math>p &lt; 0.01</math>), anxiety (<math>r = 0.43</math>, <math>p &lt; 0.01</math>) and self-reported health (<math>r = 0.31</math>, <math>p &lt; 0.01</math>).</p> <p>Experiential avoidance contributed 4% of the unique variance in depression (<math>\beta = 0.22</math>, <math>p &lt; 0.01</math>). The interaction between self-reported health and experiential avoidance contributed a further 8% (<math>\beta = 1.96</math>, <math>p &lt; 0.01</math>).</p> <p>Experiential avoidance contributed 11% of the variance in anxiety (<math>\beta = 0.35</math>, <math>p &lt; 0.01</math>). The interaction between self-reported health and experiential avoidance contributed a further 20% of the variance of anxiety (<math>\beta = 3.12</math>, <math>p &lt; 0.01</math>).</p> <p>There was not a significant relationship between experiential avoidance and functional impairment.</p>

Brummer and Stopa (2014); United Kingdom	Community dwelling older adults recruited online through a university questionnaire site and a volunteer list.	75	65-91; M = 74.3 (6.3) 73%	ERQ: reappraisal, suppression.	DASS-21	Correlation	There were no significant correlations between reappraisal and suppression on one hand and anxiety, stress, or depression on the other.
Chung et al. (2008); United Kingdom	Older adults who suffered a myocardial infarction recruited from two general practices.	96	Range NS M = 70.3 (7.3) 18.7%	COPE Scale: planning, suppression, positive reinterpretation, behavioural disengagement.	PDS	MANCOVA	<p>Patients with full posttraumatic stress symptoms (PTSD) used suppression (<math>F = 11.02, p = 0.001</math>) and behavioural disengagement (<math>F = 6.32, p = 0.003</math>) significantly more frequently than patients with no or partial PTSD symptoms.</p> <p>There were no statistical differences in the use of planning between patients with no or partial PTSD symptoms vs. those with full PTSD.</p> <p>There were no statistical differences in the use of positive reinterpretation between patients with no or partial PTSD symptoms vs. those with full PTSD.</p>

Danhauer et al. (2005); USA	Frail older adults who were residing long-term in care nursing units recruited through staff members working on these facilities.	94	65-104; M = 83.4 (8.3) 86.2%	COPE Inventory: positive reappraisal	-CES-D -SRH -OARS-PADL -PWB-SF	Correlation Regression	<p>There was a negative correlation between positive reappraisal and CES-D (<math>r = -0.31, p &lt; 0.05</math>).</p> <p>Greater use of positive reappraisal was a significant predictor of four psychological well-being indices: Environmental Mastery (<math>\beta = 0.40, p &lt; 0.001</math>), Personal Growth (<math>\beta = 0.32, p &lt; 0.01</math>), Positive Relationships With Others (<math>\beta = 0.26, p &lt; 0.05</math>) and Self-Acceptance (<math>\beta = 0.29, p &lt; 0.01</math>).</p> <p>There were no significant correlations between positive reappraisal and either self-rated health or activities of day living.</p>
D'Hudson and Saling (2010); Australia	Older adults recruited from senior community groups and centres. Participants received surveys in the mail.	138	65-97; M = 77 (7.9) 65%	-Brief COPE: avoidance -aRRS: distinguishes between brooding and rumination	GAI	Correlation Regression	<p>Avoidance correlated positively with anxiety (<math>r = 0.33, p &lt; 0.01</math>).</p> <p>Rumination had the highest correlation with anxiety (<math>r = 0.57, p &lt; 0.01</math>) followed by brooding (<math>r = 0.55, p &lt; 0.01</math>).</p> <p>Brooding explained 12% of the variance in anxiety scores (<math>\beta = 0.32, p &lt; 0.005</math>).</p> <p>Avoidance coping strategies did not predict anxiety scores.</p>

Erskine et al. (2007); UK	Retired community dwelling adults recruited from a subject pool of older adults who had participated in previous research.	62	64-84 M = 73.6 ( 5.5) 49.2%	WBSI RI	BDI	Correlation	Rumination positively correlated with depression ( $r = 0.39, p < 0.01$ ).  Thought suppression did not correlate with depression scores.
Fernández-Fernández et al. (2014); Spain	Older adults recruited from senior centres.	311	60-90 M = 71.3 (6.9) 71.7%	RRS-Brief	-CES-D -LTS	Correlation Regression	Rumination positively correlated with depression ( $r = 0.58, p \leq 0.01$ ) and inversely with frequency of leisure activities ( $r = -0.22, p \leq 0.01$ ).  Rumination had a moderating effect on the relationship between the frequency of leisure activities and depressive symptomatology.
Garnefski and Kraaij, (2006); The Netherlands	Older adults recruited from the municipal directory of a medium size town.	89	66-97 M = 77 (6.1) 52%	CERQ : rumination, planning, positive reappraisal	GDS	Correlation Regression	Rumination correlated positively with depression ( $r = 0.42, p < 0.001$ ) and inversely with positive reappraisal ( $r = -0.27, p < 0.05$ ).  Significant main effects on depressive symptoms were found for rumination ( $\beta = 0.26, p < 0.001$ ) and positive reappraisal ( $\beta = -0.64, p < 0.001$ ).  No association was found between planning and depressive symptoms.

Gass, 1987; USA	Older widows recruited from Catholic parishes	100	65-81 M = 71.3 (NS) 100%	WCC: problem focused	SIP	Correlation	Problem focused ways of coping did not correlate with physical and psychosocial health status.
Gerolimatos and Edelstein, 2012; USA	Older adults recruited from senior centres and independent living facilities, and through cable television and email announcements.	86	60-90 M = 69.9 (8.1) 52%	ERQ: reappraisal and suppression	SHAI	Correlation	Reappraisal did not correlate with scores on health anxiety.  Suppression did not correlate with scores on health anxiety.
Ingersoll- Dayton et al. (2010); USA	Participants recruited from an ongoing national probability sample survey	965	67-98 M = 77.3 (6.1) 63%	WBSI	CES-D	Correlation Regression	Depression correlated positively with rumination ( $r = 0.40, p < 0.001$ ).  Significant main effects on depressive symptoms were found for rumination ( $\beta = 0.36, p < 0.001$ ).
Jones et al. (2003); USA	Older adults recruited from senior centres. Authors did not specify method of recruitment.	129	65-89 M = 75.4 (6.1) 65.9%	CISS avoidance- oriented coping	-PGC -PANAS -MAI -SF-12	Correlation Regression	Avoidance oriented coping showed a modest relation with negative affect ( $r = 0.30, p < 0.001$ ).  Avoidance oriented coping did not correlate with positive affect or scores on life satisfaction, objective nor perceived health status.

Kant et al. (1997); USA	Older adults recruited from civic, social, and religious organisations. Authors did not specify method of recruitment.	98	60-80 M = 69 (5.4) 70%	SPSI-R: positive problem orientation, negative problem orientation, rational problem solving	-BDI -STAI	Correlation Regression	Problem-solving ability was inversely related to depression ( $r = -0.53, p < 0.01$ ) and anxiety ( $r = -0.63, p < 0.01$ ).
Neundorfer, (1991); USA	Caregivers of persons with dementia recruited from a research registry.	60	60-85 M = 72 (5.7) 63%	WCC: escape-avoidance, problem-solving, positive reappraisal	-BSI -Phy-OARS -STR	Correlation	<p>Escape-avoidance correlated positively with caregiver stress (<math>r = 0.40, p &lt; 0.001</math>) and depression (<math>r = 0.55, p &lt; 0.001</math>). Escape-avoidance did not correlate with anxiety measures. Escape-avoidance was not associated with physical problems.</p> <p>Problem solving correlated with anxiety (<math>r = -0.22, p &lt; 0.001</math>). Problem solving was not associated with measures of depression, physical disability neither caregiver stress.</p> <p>Positive reappraisal was not related to measures of anxiety, stress or depression.</p>



Nolen-Hoeksema and Aldao, (2011); USA	Older adults recruited through random-digit dialling of residential telephone numbers.	297	65-75 M = NS (NS) 55.2%	Brief COPE: suppression, reappraisal RRS	BDI Short form	Correlation	<p>Rumination and suppression were significantly positively correlated with depressive symptoms respectively in both men (<math>r = 0.31, p &lt; 0.001</math>; <math>r = 0.46, p &lt; 0.001</math>) and women (<math>r = 0.61, p &lt; 0.001</math>; <math>r = 0.44, p &lt; 0.001</math>).</p> <p>Reappraisal did not correlate either with anxiety or depression in any of the groups.</p>
Opdebeeck et al. (2015); UK	Older adults recruited through age-well centres, active retirement and church groups.	236	60-92 M = 70.9 (7.66) 61.9%	RRS Short Form	HADS	Correlation	<p>Rumination correlated with anxiety and depression scores respectively in the low cognitive reserve group (<math>r = 0.37, p &lt; 0.01</math>; <math>r = 0.36, p &lt; 0.01</math>) and in the high cognitive group (<math>r = 0.47, p &lt; 0.01</math>; <math>r = 0.29, p &lt; 0.05</math>)</p>

Orgeta, (2011); UK	Older community residents recruited from a university panel of volunteers.	67	60-82 M = 69.9 (3.5) 61.4%	ERQ: cognitive reappraisal, expressive suppression	GDS	Regression	<p>Greater use of cognitive reappraisal was inversely related to depressive symptoms, <math>F(1, 66) = 13.16, p &lt; 0.01, r = 0.41</math>.</p> <p>Reporting greater use of expressive suppression was associated with increasing levels of depression, <math>F(1, 66) = 8.09, p &lt; 0.01, r = 0.32</math>.</p>
Petkus et al. (2012); USA	Homebound older adults receiving in-home services recruited through aging service agencies.	142	60-? M = 74.7 (8.3) 79.6%	WBSI	BSI-18	Regression	<p>Thought suppression was associated with increased likelihood of experiencing clinically significant somatic symptoms (<math>OR = 1.139, 95\% CI = 1.024-1.267, p = 0.017</math>).</p> <p>Participants were more likely to meet criteria for a depressive disorder (<math>OR = 1.287, 95\% CI = 1.069-1.550, p = 0.008</math>) and for adjustment disorder (<math>OR = 1.24, 95\% CI = 1.052-1.466, p = 0.011</math>) if they used higher levels of thought suppression.</p> <p>Thought suppression did not predict anxiety scores.</p>

Schanowitz and Nicassio, (2006); USA	Older adults in residential care facilities recruited through residential care administrators.	100	65-? M = 83.1 (7.5) 66%	COPE: positive reappraisal	-PANAS-SF -PWB-SF -SF-36	Correlation Regression	<p>Positive reappraisal correlated positively with higher positive affect (<math>r = 0.51, p &lt; 0.01</math>), autonomy (<math>r = 0.21, p &lt; 0.05</math>), positive social relations (<math>r = 0.37, p &lt; 0.01</math>) and self-acceptance (<math>r = 0.37, p &lt; 0.01</math>).</p> <p>Greater use of positive reappraisal was a significant predictor of higher positive affect (<math>\beta = 0.28, p &lt; 0.05</math>), positive relationships with others (<math>\beta = 0.36, p &lt; 0.05</math>) and self-acceptance (<math>\beta = 0.40, p &lt; 0.05</math>). Positive reappraisal was not associated either with measures of negative affect or of physical functioning.</p>
Thomsen et al. (2005); Denmark	Community-dwelling older people recruited from GP practices	302	70-85 M = 75.2 (3.9) 54%	ECQ-R	-BDI -POMS-37	Correlation	<p>Rumination correlated with depression using the BDI (<math>r = 0.42, p &lt; 0.05</math>) and the POMS scale (<math>r = 0.34, p &lt; 0.05</math>).</p> <p>Rumination correlated with anxiety and anger respectively (<math>r = 0.38, p &lt; 0.05</math>; <math>r = 0.27, p &lt; 0.05</math>).</p>

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*Note.* NS = Not specified. **ER measures:** **Avoidance:** AAQ = Acceptance and Action Questionnaire; Brief COPE Coping Orientation to Problems Experienced; CISS = Coping Inventory for Stressful Situations; WCC = Ways of Coping Checklist. **Positive reappraisal:** Brief COPE; CERQ = Cognitive Emotion Regulation Questionnaire; COPE Scale; ERQ = Emotion Regulation Questionnaire; WCC = Ways of Coping Checklist; **Problem solving:** CERQ = Cognitive Emotion Regulation Questionnaire; COPE Scale; SPSI-R = Social Problem-Solving Inventory-Revised; WCC = Ways of Coping Checklist. **Rumination:** aRRS = Adapted ruminative response scale; CERQ = Cognitive Emotion Regulation Questionnaire; ECQ-R = Emotional Control Questionnaire; RI = Rumination Inventory; RRS Brief = Ruminative Responses Scale; WBSI = White Bear Suppression Inventory. **Suppression:** WBSI = White Bear Suppression Inventory. **Anxiety/Depression/Stress measures:** BDI = Beck Depression Inventory; BSI = Brief Symptom Inventory; BSI-18 = Brief Symptom Inventory – 18; CES-D = Center for Epidemiologic Studies Depression Scale; DASS-21 = Depression Anxiety Stress Scale; GAI = Geriatric Anxiety Inventory; GDS = Geriatric Depression Scale; GDS-SF = Geriatric Depression Scale – Short Form; HADS = Hospital Anxiety and Depression Scale; PANAS = Positive and Negative Affect Schedule; PANAS-SF = Positive and Negative Affect Schedule-Short Form; POMS-37 = Profile of Mood States; PDS = Posttraumatic Stress Diagnostic Scale; SHAI = Short Health Anxiety Inventory; STAI = State-Trait Anxiety Inventory; STR = Caregiver’s appraisal of stress measure by The Memory and Behaviour Problems Checklist, Part B. **Activities of day living/ Disability/ Self-reported health measures:** FI = Functional impairment; MAI = Health Conditions Checklist of the Multilevel Assessment Instrument; OARS-PADL = Duke Older Americans Resources and Services Procedures- Physical Activities of Daily Living; Phy-OARS = Physical health Section of OARS; SF-36 = Medical Outcomes Study 36- Items Health Survey; SIP = Sickness Impact Profile; SRH = Self-reported health. **Life satisfaction/ Positive Psychological well-being measures:** LTS = Leisure Time Satisfaction; PGC = Philadelphia Geriatric Center’s Morale Scale-revised; PWB-SF = Scales of Psychological Well-being- Short Form.

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The average age of the OP population ranged from 60 years to 104 years with an average range for the whole sample of 24 years. (Danhauer, Carlson, & Andrykowski, 2005). The majority of the studies (18/20) looked at OP living at the community who were recruited opportunistically. Six studies looked at specific population groups including: OP who suffered a myocardial infarction (Chung, Berger, Jones, & Rudd, 2008); older widowed women (Gass, 1987); caregivers of persons with dementia (Neundorfer, 1991); homebound older adults (Petkus, Gum, & Loebach Wetherell, 2012) and OP living in residential facilities (Danhauer et al., 2005; Schanowitz & Nicassio, 2006). The percentage of females varied according to the studied population: from 19% in OP who had suffered a myocardial infarction (Chung et al., 2008) to 100 % in a sample of widows (Gass, 1987). The percentage of females across the whole sample was 63.75%. Three of the twenty studies were conducted with non-English speaking populations (Fernández-Fernández, Márquez-González, Losada-Baltar, & Romero-Moreno, 2014; Garnefski & Kraaij, 2006; Thomsen, Mehlsen, Viidik, Sommerlund, & Zachariae, 2005).

### **Measures of the included studies**

ER was measured using a wide variety of self-report measures, with the COPE inventory (Carver, Scheier, & Weintraub, 1989) being the most commonly used tool. Only the Brief Ruminative Response Scale (Jackson & Nolen-Hoeksema, 1998) and the Adapted Ruminative Response Scale (Rewston, Clarke, Moniz-Cook, & Waddington, 2007) were reported by the authors as validated measures in an OP population. There was also a high heterogeneity regarding outcome measures across the 20 studies, although the majority focused on scales of depression and anxiety. In fact, only two articles out of twenty included measures of positive psychological attributes such as personal growth or positive

relationships with others (Danahauer et al., 2005; Jones, Rapport, Hanks, Lichtenberg, & Telmet, 2003). Out of the 16 measures used to assess depression, anxiety or stress only two (the Geriatric Anxiety Inventory and the Geriatric Depression Scale) were designed for OP. The psychometric properties for the Short Health Anxiety Inventory have been only examined in a sample of university students (Abramowitz, Deacon and Valentiner, 2007) while the Posttraumatic Stress Diagnostic Scale (Foa, 1995) was administered to participants 18 to 65 years old. The outcome measures used in the remaining studies were intended for use with young and middle age adults, but they have been validated in OP.

### **Quality of included studies**

Given the heterogeneity of the measures used in the studies, a meta-analytical synthesis of the literature was not deemed suitable. Studies were however assessed for methodological quality. Numerous quality assessment tools are available for evaluating treatment effectiveness using a randomised controlled trial design but only a few are available to assess observational studies. The Reporting of Observational Studies in Epidemiology (STROBE; Vandembroucke et al., 2014) is an instrument that is supported by the Cochrane Collaboration and contains a checklist of recommendations for items to be included in reports of observational studies in epidemiology. This tool was not designed to evaluate methodological quality, but it was used as a framework in conjunction with the Critical Appraisal Skills Programme (CASP) (CASP, 2013) and the Newcastle -Ottawa Scale (Wells et al., 2012) adapted for cross-sectional studies to develop the quality assessment tool for this systematic review (Appendix B).

The studies were rated against twelve quality criteria. Each quality criterion for each study was classified according to one of the following outcome ratings:  $\checkmark$  (2 points) = “well-addressed”;  $X\checkmark$  (1 point) = “partially addressed”;  $X$  (0 points) = “poorly addressed”, “not addressed” or “not reported”. When a quality criterion was not applicable (NA) a prorated score was calculated. The scoring on the twenty-four point scale (e.g. 18 points for Andrew and Dulin, 2007 study) was converted to a ten points grading scale to ease interpretation:

$$\left\{ \begin{array}{l} 18/24=x/10 \\ 18*10/24=x \\ x=7.5 \end{array} \right\}$$

The lead author (BR) and one supervisor (KQ) independently evaluated the methodological quality of 5 studies (25% of the total). An inter-rater reliability analysis using the Kappa statistic was performed to determine consistency between raters. Fair agreement was found: Kappa = 0.23;  $p > 0.05$  (Landis & Koch, 1977). Discrepancies were then reviewed and discussed until a consensus was reached. Table 3 reports the rating on each of the quality criteria.

Table 3. Evaluation of methodological quality

Study	Theoretical framework	Focused Question	Design	Clear Inclusion Criteria	Description Research Setting	Representativeness	ER Measures	Outcome Measures	Missing Data	Statistical Tests <sup>1</sup>	Confounds controlled-analysis	Conclusions from data	Total score (0-10)
Andrew and Dulin (2007); New Zealand	√	√	√	NR	X√ (no info period)	X (only white older New Zealanders)	√	X√ (non-validated tools but authors calculate alpha)	√	√	√ (authors perform correlation to check potential relationships)	√	7.5
Brummer and Stopa (2014); UK	√	√	√	NR	X√ (no info period)	X√ (opportunistic-self-selected sample)	√	√	√	√	X√ (gender)	√	7.9
Chung et al. (2008); UK	√	√	√	√	X√ (no info period)	X√ (opportunistic-self-selected sample)	X√ (no study alpha)	X√ (no study alpha)	NR	√	√	√	7.5
Danhauer et al. (2005); USA	√	√	√	√	X√ (no info site)	X√ (opportunistic-self-selected sample)	√	√	√	√	√	√	9.1
D'Hudson and Saling (2010); Australia	√	√	√	√	X√ (no info period)	X√ (opportunistic-self-selected sample)	X√ (no study alpha)	X√ (no study alpha)	√	√	X√ (gender)	√	7.9

Note: √ (2 points) = well-addressed; X√ (1 point) = partially addressed; X (0 points) = poorly addressed or not reported; NA = not applicable; NR= not reported.



Table 3. Evaluation of methodological quality (cont.)

Study	Theoretical framework	Focused Question	Design	Clear Inclusion Criteria	Description Research Setting	Representativeness	ER Measures	Outcome Measures	Missing Data	Statistical Tests <sup>1</sup>	Confounds controlled-analysis	Conclusions from data	Total score (0-10)
Erskine et al. (2007); UK	√	√	√	√	X (authors referenced a non-published paper)	X√ (opportunistic-self-selected sample)	X√ (no study alpha)	X√ (no study alpha)	√	√	X√ (age)	√	7.5
Fernández-Fernández et al. (2014); Spain	√	√	√	NR	X√ (no info period)	X√ (opportunistic-self-selected sample)	X√ (non published)	√	NR	√	X√ (gender)	√	6.6
Garnefski and Kraaij, (2006); Netherlands	√	√	√	NR	X√ (no info period)	√ (random adult and OA samples)	√	√	NR	√	X√ (gender)	√	7.5
Gass, 1987, USA	√	√	√	√	X√ (no info period)	X (only catholic)	√	X√ (no study alpha)	NR	X (Normal distributed?)	X	√	5.8
Gerolimatos and Edelstein, (2012); USA	√	√	√	NR	X√ (no info period)	X√ (opportunistic-self-selected sample)	√	√	X√ (info respondents vs. non respondents?)	√	√ (age, gender, education)	√	7.9

Note: √ (2 points) = well-addressed; X√ (1 point) = partially addressed; X (0 points) = poorly addressed or not reported; NA = not applicable; NR= not reported.

Table 3. Evaluation of methodological quality (cont.)

Study	Theoretical framework	Focused Question	Design	Clear Inclusion Criteria	Description Research Setting	Representativeness	ER Measures	Outcome Measures	Missing Data	Statistical Tests <sup>†</sup>	Confounds controlled-analysis	Conclusions from data	Total score (0-10)
Ingersoll-Dayton et al. (2010); USA	√	√	√	NR	√	√ (probability sample survey)	X rumination measured scale for thought suppression	√	NA (face to face interview)	√	√	√	7.5
Jones et al. (2003); USA	√	√	√	NR	X√ (no info period)	X√ (opportunistic-self-selected sample)	√	√	NR	√	X√ (age; education)	√	7.0
Kant et al. (1997); USA	√	√	√	√	X√ (no info recruitment)	X√ (opportunistic-self-selected sample)	X√ (no study alpha)	X√ (no study alpha)	NR	√	X√ (age)	√	7.0
Neundofer, (1991); USA	√	√	√	NR	X√ (no info period)	X√ (opportunistic-self-selected sample)	√	√	NA (face to face interview)	√	X√ (age, gender)	√	7.0
Nolen-Hoeksema and Aldao, (2011); USA	√	√	√	NR	X√ (no info period)	√ (random digit-dialling)	√	√	NR	√	X√ (age, gender)	√	7.5

Note: √ (2 points) = well-addressed; X√ (1 point) = partially addressed; X (0 points) = poorly addressed or not reported; NA = not applicable; NR= not reported.

<i>Study</i>	<i>Theoretical framework</i>	<i>Focused Question</i>	<i>Design</i>	<i>Clear Inclusion Criteria</i>	<i>Description Research Setting</i>	<i>Representativeness</i>	<i>ER Measures</i>	<i>Outcome Measures</i>	<i>Missing Data</i>	<i>Statistical Tests<sup>1</sup></i>	<i>Confounds controlled-analysis</i>	<i>Conclusions from data</i>	<i>Total score (0-10)</i>
Opdebeeck et al. (2015); UK	√	√	√	√	X√ (no info period)	X√ (opportunistic-self-selected sample)	X√ (no study alpha)	X√ (no study alpha)	X√	√	X	√	7.0
Orgeta, (2011); UK	√	√	√	√	X√ (no info period)	X (university sample only)	√	X√ (no study alpha)	NR	X√ (no info respondents vs. non respondents)	X√ (age; education)	√	6.6
Petkus et al. (2012); USA	√	√	√	√	√	X (population less ethnically diverse, younger, fewer medical conditions)	√	√	NA (face to face interview)	X√ (no info respondents vs. non respondents)	√	√	7.9
Schanowitz & Nicassio, 2006; USA	√	√	√	√	X√ (no info period)	X√ (opportunistic-self-selected sample)	√	√	NA (face to face interview)	√	√	√	8.3
Thomsen et al. (2005); Denmark	√	√	√	√	X√ (no info period)	√	√	√	NR	√	√	√	8.75

Note: √ (2 points) = well-addressed; X√ (1 point) = partially addressed; X (0 points) = poorly addressed or not reported; NA = not applicable; NR= not reported.

Overall, the methodological quality of included studies was adequate (only three out of 20 studies scored less than 7/10). According to the quality criteria, Danhauer et al., (2005) was the methodologically strongest study while Gass (1987) was the weakest, with the other studies falling on a continuum between the two. Since a total quality score for a study lacks details about the individual elements of the quality assessment, these are commented on below.

All studies gave an adequate theoretical introduction, stated specific aims and objectives and had an adequate design. Regarding inclusion and exclusion criteria, 45% of the studies did not specify any inclusion/exclusion. Some of the studies excluded participants with memory difficulties but nearly half of the studies (9/20) did not screen for cognitive impairment. The research setting was well or at least partially described in all the studies, although only two specified the period of recruitment or data collection. The study by Erskine, Kvavilashvili, & Kornbrot, 2007 was rated the poorest study regarding the description of the research setting, as the authors described the population by giving the reference to a manuscript in preparation. In association with the representativeness of the OP populations, only three out of the 20 studies recruited the sample using probability sampling methods (Garnefski & Kraaij, 2006; Ingersoll-Dayton, Torges, & Krause, 2010; Nolen-Hoeksema & Aldao, 2011). Twenty percent of the articles cited the lack of representativeness as a one of their main limitations.

Seventy percent of the studies reported Cronbach Alpha values for the ER measures used in their samples. The only study that was rated as poor about the ER measures was Ingersoll-Dayton et al., 2010 given that the authors measured rumination with a scale designed to assess thought suppression (The White Bear Suppression Inventory). The statistical tests were

well described and appropriated in 85 % of the studies, although only two out of twenty corrected for multiple comparisons. Thirty percent of the studies controlled for all potential confounding variables (i.e.: age, gender and education) although from those only 6 out of 20 included age as a variable of interest in the analysis. This fact is relevant since the average range for the whole population was twenty four years. Twenty percent of the studies did not control for any of the potential confounding variables. Regarding missing data, nine out twenty articles failed to give details.

## **Key Findings of Included Studies**

### **ER and anxiety, depression, and stress.**

Nineteen out of twenty studies explored the relationships between measures of mood and ER. They were given a quality score of 7/10 or higher except the one by Fernández-Fernández et al., (2014) and the one by Orgeta (2011). Regarding the associations of ER and measures of mood, the only ER strategy with a consistent pattern of findings was *rumination*, for which the expected association with anxiety, depression or stress was found in all seven studies including it. A pattern of mixed results was found for avoidance, problem-solving, reappraisal and suppression with some of the studies reporting a combination of negative and positive results. For *avoidance*, inconsistent results were reported; it was positively associated with increased anxiety and/or depression scores in two articles (Andrew & Dulin, 2007; Chung et al., 2008) but mixed results were found by three other research groups (D'Hudson & Saling, 2010; Jones et al., 2003; Neundorfer, 1991). *Problem-solving* was significantly associated with depression and anxiety in one study (Kant, D'Zurilla, & Maydeu-Olivares, 1997) but obtained mixed results in the other three studies (Chung et al., 2008; Garnefski & Kraaij, 2006; Neundorfer, 1991). The most frequently examined strategy was *suppression*, which

was positively associated with measures of posttraumatic stress symptoms and depression scores (Chung et al., 2008; Nolen-Hoeksema & Aldao, 2011; Orgeta, 2011). However, other studies did not find a correlation between suppression and anxiety, stress, or depression (Brummer, Stopa, & Bucks, 2014; Erskine et al., 2007; Gerolimos & Edelstein, 2012; Petkus et al., 2012). Finally, *reappraisal* showed the weakest relationship with measures of anxiety and depression. Only three studies reported an inverse relationship of that ER strategy (Danhauer et al., 2005; Garnefski & Kraaij, 2006; Orgeta, 2011), while six failed to find a consistent statistical association (Brummer et al., 2014; Chung et al., 2008; Gerolimos & Edelstein, 2012; Neundorfer, 1991; Nolen-Hoeksema & Aldao, 2011; Schanowitz & Nicassio, 2006).

#### **ER and self-reported health, disability and activities of day living.**

Four studies focused on the relationships between health and disability and ER (Andrew & Dulin, 2007; Gass, 1987; Neundorfer, 1991; Schanowitz & Nicassio, 2006). The quality of those studies was adequate except the investigation by Gass (1987) which obtained the lowest quality rating. Only one study found a statistically significant association, specifically an inverse association between experiential *avoidance* measured by the Acceptance and Action Questionnaire and self-reported health (Andrew & Dulin, 2007).

#### **ER and life satisfaction, personal growth and other positive emotion measures.**

The relationship between life satisfaction, positive emotion and ER was explored by four studies rated as good to very good in quality. Danhauer et al., (2005) found that greater use of positive reappraisal was a significant predictor of environmental mastery, personal growth, positive relationships with others and self-acceptance. Similar results were found by

Schanowitz and Nicassio (2006) who also found that greater use of positive reappraisal was a significant predictor of higher positive affect. Exploring the relationship between rumination and frequency of leisure activities, Fernández-Fernández et al., (2014) showed that rumination has a moderating effect on the relationship between the frequency of leisure activities and depressive symptomatology. Specifically, the results of the study support an inverse relationship between the performance of leisure activities and depressive symptomatology when elderly people obtained higher scores on the rumination scale. Finally, avoidance-oriented coping did not correlate with positive affect in a sample of OP recruited from senior centres (Jones et al., 2003).

## **Discussion**

The objective of this review was to examine the association between five emotion regulation strategies: avoidance, problem-solving, reappraisal, rumination, and suppression and well-being in OP. Of the examined ER strategies, rumination demonstrated the most consistent association with measures of anxiety, depression and stress. In contrast, reappraisal failed to show any associations in six out of nine studies exploring that strategy. Our findings are consistent with the meta-analyses carried out by Aldao et al., (2010) and Seligowski, Lee, Bardeen, & Orcutt (2015) in younger populations who found the largest effects on mental health for rumination and the smallest for reappraisal. Thus, although the use of different ER strategies changes with age (Amirkhan & Auyeung, 2007), the overall pattern of positive and negative associations between specific strategies and well-being-related outcome measures does not seem to be age-specific. Regarding the association between ER and disability, self-reported health and psychological well-being, there is not sufficient evidence from which to draw a conclusion.

According to Aldao and Nolen-Hoeksema (2012), a potential explanation for a weaker association of reappraisal with well-being might be that it is more susceptible to contextual demands whereas maladaptive strategies such as rumination produce detrimental outcomes in most contexts. In a subsequent study (Aldao and Nolen-Hoeksema, 2014), the same authors found an interaction between adaptive and maladaptive strategies. They showed that adaptive strategies had a significant association with psychopathology only when levels of maladaptive strategies were elevated, therefore suggesting that their effectiveness might depend on the other regulation strategies present in an individual's repertoire. Alternative explanation would be that adaptation depends not so much on one regulatory process but rather on the ability to flexibly regulate emotions in accord with situational demands (Bonanno, Papa, Lalande, Westphal, & Coifman, 2004; Westphal, Seivert, & Bonanno, 2010).

The most striking result of this review is that only two studies out of twenty (Danhauer et al., 2005; Schanowitz & Nicassio, 2006) included positive psychological attributes such as self-acceptance or personal growth. In spite that research in wellbeing has been growing in recent decades, depression and anxiety are consistently utilized to measure psychological well-being in older adulthood. Similar results were found by Diener and Seligman (2004) in a review examining the number of studies that include multiple well-being concepts. The authors conducted a review of publications through an extensive database of psychology journals, Psych Lit. They found 94,650 publications on "depression" and 4757 on "life satisfaction" and only 701 of these mentioned both constructs. The absence of mental illness does not equal the presence of mental health. Research has shown that measures of well-being, life satisfaction and common mental illness form distinct, correlated factors (Headey, Kelley, & Wearing, 1993; Keyes & Riff, 2003). Mental health conceived as a combination of feeling



good about and functioning well in life has been associated with lower levels of mental illness, physical health conditions at all ages and less limitations of activities of daily living (Keyes, 2005). Research in ER will benefit from taking into account both psychological distress and mental health, in which mental health is something positive.

Regarding the quality of the studies examining the association between ER and wellness measures, although overall it was adequate, some limitations should be noted. Firstly, one-third of the included studies did not control for gender. The likelihood of reporting the use of ER strategies has been found to be different in men versus women (Melendez, Mayordomo, Sancho, & Tomas, 2012), and this has been found even after controlling for self-reported depressive symptoms (Nolen-Hoeksema & Aldao, 2011). Secondly, although some studies do specify the presence of cognitive impairment as an exclusion criterion for participation, only a few used standardised methods to assess cognitive status (e.g. Opdebeeck, Nelis, Quinn, & Clare, 2015). Since self-report methods rely on memory, some of the participants might not have been able to give a reliable account of the use of different ER strategies.

The third point relates to the representativeness of the samples. Only 15% of the published research used probability-based methods to select the participants; several of those studies which do not mentioned this fact as one of their main limitations (e.g. Andrew & Dulin, 2007; Chung et al., 2008; Petkus et al., 2012). Fourthly, the age range for the included studies was very large (60 to 104 years), but only nine out twenty studies included age as a covariate. Lastly, nearly all studies included in the current review used ER measures not specifically developed for OP populations, and only a few validated their instruments for the use in the elderly. Literature shows that some of the ER measures have to be adapted to be valid for the

older population. For example, Rewston et al., (2007) adapted the Ruminative Response Scale taking into account the thinking styles associated with anxiety and depression in later life.

Regarding implications for clinical practice, our results indicate that when ER strategies are studied in isolation (i.e., not taking into account context and the simultaneous use and the potential interactions with other ER strategies) rumination seems to be the ER strategy most strongly associated with symptoms of anxiety and depression in OP population. This finding was consistent despite the heterogeneity of the studied populations such as healthy older adults, frail older people, widows and carers, and the diversity of ER strategies and outcomes measures used. A randomised controlled trial on the effectiveness of Rumination-focused cognitive behavioural therapy, in which rumination processes are tackled and challenged, has been found to be more effective in treating depression and reducing relapse than standard cognitive behavioural therapy (Teismann et al., 2014). This trial was conducted with an adult population including people from 18-65 years. New trials including group interventions have been proposed (Hvenegaard et al., 2015). The results of this systematic review support the inclusion of OP in those.

Only three studies included in this review were conducted on a non-English speaking population. Given the potential cultural differences in ER strategies (Knight & McCallum, 1998; Lee & Manson, 2014) this constitutes a substantial limitation in our understanding of the area. Interestingly, despite an overall publication bias favouring positive results (Matosin, Frank, Engel, Lum, & Newell, 2014) a significant number of studies evidencing negative results were published. Future research should consider and address the methodological

limitations discussed above. Moreover, given that frequency of health problems increases in age, future studies should expand this field of research to encompass physical health measures since almost all the examined literature focused on the relationship between ER and measures of mood. There is evidence linking health and well-being with specific coping strategies in adult populations. For example, Schott, Kamarck, Matthews, Brockwell, & Sutton-Tyrell (2009) found that endothelial dysfunction, as indicated by less vasodilatation of the brachial artery, is positively associated with measures of anger suppression. In young dementia caregivers, increased use of blaming others and wishful thinking was associated with a higher frequency of caregiver health conditions (Snyder et al., 2015). Stowell, Kiecolt-Glaser, & Glaser (2001) also found that cellular immunity was increased when participants used active coping methods (i.e. planning, positive reappraisal, and acceptance). Given the growing prevalence of chronic illnesses in an aging population and the fact that ER strategies could be potentially modified by therapeutic approaches like acceptance-based treatments and cognitive behavioural therapy, more research is needed exploring the associations between ER strategies and objective and subjective measures of physical health in OP. Finally, the relationship between ER and positive well-being measures is scarce. Research in ER should go beyond the absence of distress and dysfunction and to explore positive psychology outcomes such as flourishing, fulfilment and making a contribution to the community.

Our investigation has some limitations. Firstly, only cross sectional studies were reviewed.. Given the relatively small number of longitudinal studies, complicated further by great heterogeneity in their study design (refs) it was decided to limit this review to cross-sectional studies. However, we recognise that cross-sectional studies, although potentially useful in identifying associations, are more limited in their possible conclusions, particularly in determining the exact sequence of events and in the differentiation between cause and

effect. Secondly, the studies included in this review used multiple measures of ER including inventories measuring coping strategies (e.g COPE) and ER processes (e.g CERQ). There is a large variation in the number and type of responses and no studies so far have explored the common and distinctive features of individual measures in a systematic way; this would be a very useful topic for a future review.

Thirdly, as with any systematic review, it is possible that studies were omitted that could have otherwise met the inclusion criteria. Application of the inclusion criteria to the results of the searches identified twenty empirical papers for inclusion in this review, a surprisingly small number given the interest that ER and its relationship with well-being have received in the last decade. Nonetheless, piloting the search strategy and having searched in five different databases allows some confidence that the majority of relevant research was included. The data that could have been missed came from studies not published in peer review journals, so-called “grey literature,” e.g. theses, and studies published in languages other than English, Spanish or Portuguese. Finally, in our search strategy we use the generic term well-being rather than specific positive well-being concepts. Future research could benefit from expanding that term using new proposed models of mental health including constructs such as personal growth, self-acceptance and purpose in life (Keyes, 2005).

To summarise, in the present review, we evaluated the association between well-being in OP and five emotional regulation (ER) strategies: avoidance, problem-solving, reappraisal, rumination, and suppression. Only a conclusion about ER and negative mood measures could be made due to the scarcity of research examining the association between ER and positive psychological concepts. Rumination seems to be the ER strategy most strongly associated

with symptoms of anxiety and depression in OP population, while the findings for avoidance, problem solving, suppression and reappraisal were not always consistent. Recent developments in ER research emphasized the importance of taking into account the ability to regulate flexibly emotions in accord with situational demands. This fact seems very relevant for the study of wellbeing in OP. Quoting Nic Marks of the New Economics Foundations: “Well-being is not a beach you go and lie on. It is a sort of dynamic dance, and there’s movement in that all the time and actually it’s the functionality of that movement which actually is true levels of well-being (Nic Marks, Radio 4, 7 January 2012)”. More research is needed to explore the role of ER strategies on the “dynamic dance of well-being “in OP

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## **Chapter 2: Empirical paper**

### **What makes a good retirement?**

#### **The Role of Emotion Regulation Strategies and Internal Ageism**

##### **On Adjustment and Satisfaction with Retirement**

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## **Abstract**

The resource-based dynamic model for retirement adjustment proposes that the ease of retirement adjustment is the direct result of the individuals' access to the different type of resources: physical, cognitive, motivational, financial, emotional and social. The primary purpose of this study was to examine the role of emotion regulation strategies and ageism on adjustment and retirement satisfaction as well as to explore the impact of other contextual factors such as financial status, health, and social support. One hundred and forty-two retirees were recruited to the study and completed self-report measures assessing problem-solving, avoidance, rumination, and suppression. Traditional predictors of adjustment (wealth and health) accounted for 12% of the total variance in outcome. Problem-solving was the strongest variable in the model explaining 24% of the difference in adjustment. Interestingly, the retirees who reported not having used problem-solving as a mechanism to cope with retirement were the most adjusted. Regarding satisfaction, a retiree tended to experience higher retirement satisfaction if he or she had a greater level of self-rated mental health and increased access to household income (these variables explained 14% and 9% respectively of the total variance in retirement satisfaction). However, retirees who reported high levels of rumination experienced lower retirement satisfaction (rumination accounted for 8% of the total variance in satisfaction with retirement). Internal ageism was not a predictor of retirement adjustment or satisfaction. The results were discussed in the context of retirement planning and successful aging.

## Introduction

Retirement is a developmental transition in the life cycle that changes an individual's role in nearly every aspect of life such as marital relationships, peer relations, financial resources and leisure time. Until the 1960s, studies on retirement adjustment viewed retirement as a "crisis", a bereavement process in which the individual suffers a loss of the symbols of coping ability, youth, achievement drive and one's career (Carp, 1967). In contrast, recent research identifies retirement as a dynamic and heterogeneous process that all individuals experience in a different way (Potočnick, Tordera, & Peiro, 2011). Retirement transition and adjustment have been studied under different theoretical conceptualisations including retirement as a career development stage, retirement as a decision-making process and retirement as an adjustment process (Wang & Shultz, 2010). Conceptualising retirement as an adjustment process provides a more comprehensive approach to understanding it since the emphasis is placed on characteristics of the retirement transition such as the timing of the decision and resources associated with the decision rather than the decision per se (Wang & Shultz, 2010).

Wang, Henkens, and van Solinge (2011) integrated the different theoretical frameworks and developed a resource-based dynamic perspective based on early models of resources and adaptation (Hobfoll, 2002). The central premise of the resource perspective is that resources, as an essential factor in stress coping, are critical to conditioning the person's well-being. The person's access to physical, cognitive, motivational, financial, social and emotional resources and the ratio of resource versus deficits defines the opportunities and quality of the retirement experience. Also, these resources can vary depending on family factors, societal factors, or job characteristics. So, well-being could fluctuate up and down at any time following the variation of resources.

Much research has been conducted in recent decades to identify factors that influence retirement adjustment. Demographic characteristics such as retirement age and gender, have been proposed as contributing to well-being in retirement (Moen, 1996). Social support variables (Taylor, Goldberg, Shore & Lipka, 2006) and a sense of closeness to one's spouse (Kubicek, Korunka, Raymo, & Hoonakker, 2011) have also been found to be significant pre-retirement resources. Some studies indicated that married retirees usually adjust better than single or widowed ones (Wong & Earl, 2009) while other studies point to the importance of losing a partner during retirement transition rather than being married or having a partner *per se* (van Solinge & Henkens, 2008).

Among postretirement activities, leisure activities and volunteer work have been positively related to retirement transition and adjustment outcomes (Kim & Feldman, 2000). Bridge employment<sup>1</sup> has been associated with better mental and physical health and life satisfaction in cross-sectional (Kim & Feldman, 2000) and longitudinal studies (Zhan, Wang, Liu, & Shultz, 2009). The financial status of retirees has repeatedly been found to be positively related to the quality of retirement transition (Gall, Evans, & Howard, 1997; Pinquart & Schindler, 2007; Wong & Earl, 2009). Contradictory findings have been reported about the importance of work role identity<sup>2</sup> (how strongly the retiree identifies himself/herself with her/his work role) in retirement adjustment and satisfaction (Quick & Moen, 1998; Van Solingen & Henkens, 2008; Wong & Earl, 2009). However, the voluntariness of retirement

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<sup>1</sup> Paid employment that falls between the time when an individual leaves his or her primary career and the time of complete withdrawal from the work force.

<sup>2</sup> For a discussion about work identity see Al Gini, 1998. Work as a role identity provides a vehicle for personal expression and offers to the individual a means for personal definition.

has been found to be positively related to retiree's retirement satisfaction, life satisfaction and well-being (Reitzes & Mutran, 2004; van Solinge & Henkens, 2008).

Physical resources strongly influences what people can do in retirement, so it is not surprising that lack of disability, actual or perceived physical health have been found to be associated with retirement well-being (Gall, Evans, & Howard, 1997; Donaldson, Earl & Muratore, 2010). In contrast, the impact of positive emotions and emotional resources on retirement adjustment and satisfaction has not been comprehensively explored. Leung and Earl (2012) developed an inventory that assessed resources relevant to retirement well-being including emotional resources. The authors found that overall resources significantly accounted for additional variance in both retirement satisfaction (16%) and retirement adjustment (22%). However, the independent impact of emotional factors was not explored.

Emotion regulation or how individuals influence their emotions according to environmental demands could potentially play a major role in adjustment and satisfaction with retirement. In mental health, specific emotion regulation strategies have been argued to be either adaptive or maladaptive. In general terms, avoidance of emotions and/or situations, suppressing the expression or experience of emotions and ruminating have been associated negatively with mental well-being. Conversely, adaptive strategies, such as acceptance, problem solving and cognitive reappraisal have been linked to low levels of psychopathology (Aldao, Nolen-Hoeksema, & Schwitzer, 2010). In the first chapter of this thesis we found that rumination was the strategy most strongly associated with symptoms of anxiety and depression in OP. Acceptance and maintaining a positive attitude have been reported to promote successful aging (Holahan & Velasquez, 2011) while avoidant emotional regulation strategies have been

found to reduce the subjective sense of life's meaning when confronted with chronic illness (Hunt, Wisocki, & Yanko, 2003). To our knowledge, the impact of putatively adaptive vs. maladaptive strategies on adjustment to and satisfaction with retirement has not been explored.

According to the multilevel model of retirement, individual attributes such as emotional, health or financial resources are not the only factors influencing the retirement process. Szinovacz, (2013) proposes a conceptual framework to study retirement as a multilevel phenomenon which will also be affected by retirement organizational policies, cultural and societal values. There is empirical evidence that societal values that strengthen retirement norms and expectations affect the level of planning and goal clarity of future retirees (Hershey, Henkens, & van Dalen, 2007) and interact with personal resources to influence expected retirement adjustment (Zaniboni, 2015). Likewise, the stigmatisation of aging people by some corporate bodies<sup>3</sup>, determine the wellbeing of OP. Research has showed that retirees that characterize themselves with negative stereotypes of aging workers (such as less effective or creative) have lower self-esteem and life satisfaction compared to those individuals who do not integrate such characteristics (Tougas, Lagacé, de La Sablonnière, & Kocum, 2004). According to stereotype-embodiment theory (Levy, 2009), the view of the self as an older person play a central part in mediating the relationship between age stereotypes and developmental outcomes. Self-perceptions of aging have been shown to influence longevity (Levy, Slade, Kunkel, & Kasl, 2002), health behaviours (Levy & Myers, 2004; Quinn, Laidlaw & Murray, 2009), disability (Moser, Spagnoli, & Santos-Eggimann,

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<sup>3</sup> For a discussion about ageism, see Bytheway & Johnson, 1997. External ageism refers to a set of negative beliefs about old age held by society while internal ageism is the negative view of the self as an old person rather than others.

2011) and quality of life (Long, Ferreira, Power, Laidlaw, & Lorimer, 2016 “Manuscript in preparation”). To our knowledge, the potential effects of negative internalized ideas about getting older on adjustment and satisfaction with retirement have not been studied.

## **Research aims and hypothesis**

This study seeks to test the impact of emotional regulation abilities and attitudes to aging as potential influences on adjustment to and satisfaction with retirement. The term adjustment refers to the process of getting used to the changed circumstances of life in retirement. Satisfaction with retirement represents contentment with one’s life in retirement (van Solinge & Henkens, 2008). The following hypotheses will be tested:

1. An easier adjustment to retirement will be predicted by the retirees’ use of problem-solving (as an adaptive ER strategy).
2. Avoidance, rumination, and suppression will predict a more difficult adjustment to retirement and a lower level of satisfaction with retirement (as maladaptive strategies).
3. Internal ageism will predict a more difficult adjustment to retirement and less satisfaction with retirement.

In addition, the potential impact of job-related variables (financial status, type of job), social related variables (marital status, social support) and health-related variables (mental and physical health) as predictors of retirement adjustment and satisfaction will be explored.

## **Method**

### **Design and sampling procedure**

The notion of retirement is complex, and there is not general agreement on precisely how retirement should be defined (for a review of the definition of retirement see Denton & Spencer, 2009). For the purpose of this study, we defined retiree as a person who is retired from full and part-time work and perceives him or herself as retired. Other inclusion criteria for participating in the study were to be sixty years or older, community-dwelling (not residing in nursing or residential care) and being able to complete the questionnaires unaided.

Ethical approval for the research was granted by the School of Health in Social Sciences at the University of Edinburgh (Appendix C). Participants were recruited through an opportunistic sample of personal contacts, active retirement group, over 50s clubs and church groups in Edinburgh, Fife, and Dundee. Other sources were the University of Third Age (Fife and West Lothian) and the Retired Police Officers' Association Scotland. The main researcher contacted a representative of the respective group by email/phone and explained the purpose of the study. The representative then contacted the members of the association and gave the details of the researcher. Participants who contacted the researcher and were willing to participate were sent a questionnaire pack in the post. Each pack contained a cover letter (Appendix D) an information sheet about the project (Appendix E), consent form (Appendix F), the questionnaire (Appendix G) and a freepost envelope.

One hundred and sixty questionnaires were sent out in total, and 142 questionnaires were returned (88% response rate). Out of these 142 participants nine people were excluded because they were younger than 60 years old. Another six were not considered in the

analysis as they did not perceive themselves. Given that, study-measures were self-report questionnaires we excluded those participants with potential memory deficits. We did not screen for cognitive impairment but excluded in addition fifteen people who reported moderate or severe problems in the memory or/and concentration items in the WHODAS 2.0 (World Health Organization Disability Assessment Schedule; Andrews, Kemp, Sunderland, Von Korff, & Ustun, 2009).

The G\*Power Programme was used to estimate the desired sample size (Faul, Erdfelder, Lang, & Buchner, 2007). In a previous research by Leung and Earl (2012) the effect size of retirement resources in retirement adjustment and satisfaction was reported as large ( $R^2 = .36 - .44$ ). A minimum sample size of 85 subjects was anticipated assuming a large-size relationship (.26) between the outcomes and the twelve predictor variables: occupation, financial status, marital status, social support, health perception, mental well-being, disability, problem-solving, suppression, rumination, avoidance and attitudes to ageing.

## **Measures**

**Demographic variables.** A demographic questionnaire was designed to collate information on gender, date of birth, education, marital status, main occupation before retirement, financial situation, the length of retirement, characteristic of the transition to retirement, caregiver demands, voluntary work and involvement in leisure activities (see Appendix G). The occupations were coded according to the UK Standard Occupational Classification (Palgrave Macmillan, 2010)



## **Dependent variables**

### ***Adjustment and satisfaction with retirement***

This scale (Van Solinge & Henkens, 2008) contained three items measuring the older worker's evaluation of the difficulties that he or she had in adjusting to retirement. The remaining four items assessed the older worker's contentment with retirement. High scores indicate low adjustment problems and high satisfaction with retirement, respectively. The psychometric properties of the scales used can be found in Table 2.

## **Predictor variables**

### ***Emotional regulation***

*The Coping Strategy Indicator* (CSI; Amirkhan, 1990) was used to measure avoidance and problem solving. These coping strategies are measured by two subscales, each one containing eleven items. Responses were measured using a three-point Likert scale from 1 to 3, in which 1 (not at all) and 3 (a lot), with higher scores denoting more avoidance/problem solving. Desmond, Shevlin, and MacLachlan (2006) supported the applicability of the scale in a sample of elderly British war veterans with chronic physical health conditions.

*The adapted Ruminative Response Scale* (aRRS; Rewston, Clarke, Moniz-Cook, & Waddington, 2007) was used to measure rumination. It is a self-report measure adapted for British older people that measures worry, brooding and reflection (process aimed at finding solutions). For this study, the five items contributing to a factor termed "brooding" were used. Brooding may be defined as "thinking that is self-focused, self-critical and concerned with unattained standards or goals in the context of depressed mood" (Rewston et al., 2007).

Responses were measured using a Likert scale from 1-4, in which 1 (*almost never*) and 4 (*almost always*), with high scores indicating a greater level of rumination.

*The Courtauld Emotional Control Scale* (CECS; Watson & Greer, 1983) was used to measure suppression. The questionnaire consisted of three subscales, each composed of seven items. Responses were measured using a Likert scale from 1-4, in which 1 (*almost never*) and 4 (*almost always*). The scores represented how strongly the individual tends to control anger, sadness and worry. Items relating to the expression of response were reversed in scoring. It has been used in a sample of older patients with a range of chronic diseases (Janowski, Kurpas, Kusz, Mroczek, & Jedynak, 2014).

*The World Health Organization Disability Assessment Schedule* (WHODAS 2.0; Andrews et al., 2009) was used to measure an individual's level of functioning in six major life domains including cognition, mobility, self-care, getting along, life activities and participation in society. The twelve items of the scale were scored according to a Likert scale from 1 - 5, in which 1 (*none*) and 5 (*extreme or cannot do*). The scores assigned to each of the items were summed to obtain a total score that describes the degree of functional limitation that the person has, with higher scores indicating more disability. This scale has been widely used in people over 60 years old (e.g. Sousa et al., 2009) and normative data has been published for the adult population including OA (Andrews et al., 2009).

*Warwick-Edinburgh Mental Well-being Scale* (SWEMWBS; Stewart-Brown et al., 2009). This scale was used to measure mental well-being (as opposed to mental illness or disorder). Responses are scored using a Likert scale from 1-5 comprise, in which 1 (*none of the time*)

and 5 (*all of the time*), with high scores indicating a greater level of mental well-being. A short 7-item version of the WEMWB was used in this study as it has been shown to have robust measurement properties combined with brevity in a population survey including OA (Stewart-Brown et al., 2009).

*Self-rated health.* Self-rated health was measured using the following three questions. “How would you rate your overall health right now?” with reply alternatives: (5) Excellent, (4) Very good, (3) Good, (2) Fair and (1) Poor.

*Internal ageism.* The fear of the aging process was measured using The Rame Questionnaire, which was developed in a British population sample (Parnell, Worthington, Nursing, & Bender, 2001; Bender, 2003). The measure comprises 23 items, eight positively oriented items (e.g. ‘I am keeping in touch with today’s society’) and 12 negatively oriented items (e.g. ‘My best achievements are in the past’). Also, there are three re-phrased items (not scored) to assess respondent understanding. Items are scored on a four-point Likert scale ranging from ‘disagree strongly’ to ‘agree strongly’, and scored either 0 to 3 or 3 to 0, as appropriate, with 3 indicating higher internalised ageism (i.e. positively oriented items are reversed scored).

*The Multidimensional Scale of Perceived Social Support (MSPSS;* Zimet, Dahlem, Zimet, & Farley, 1988). This scale measures the perceived level of support an individual receives from family, friends, and significant others. It consists of 12 items scoring on a seven-point Likert scale in which 1 (*very strongly disagree*) and 7 (*very strongly agree*), with higher scores denoting more social support. This scale has been validated for use with OP (Stanley, Beck,

& Zebb, 1998) and has been used extensively in research with this population (Cernin, Lysack, & Lichtenberg, 2011).

## Participant characteristics

The final sample consisted of 112 community-dwelling adults between 60 and 90 years of age ( $M = 72.02 [6.96]$ ). The average length of retirement was 12 (9.18) years. The three reasons most frequently mentioned for retiring were being eligible for a pension (43.8%), followed by having enough income (33.9%) and wanting to do other things (23.2%).

Table 1. *Sample Characteristics*

Variable	%	Variable	%
Gender		Health perception	
Male	38.4	Excellent	20.5
Female	61.6	Very good	33.9
Household status		Good	31.3
Married/Partnered	65.2	Fair	13.4
Single	8.9	Poor	.9
Widowed	17.9	Voluntary retirement	
Divorced/Separated	8.0	Yes	87.5
Education		No	12.5
High school	25.9	Time retirement	
Technical certificate	28.6	Too early	8.0
University degree	45.5	About right	91.1
Occupation		Too late	.9
Professional occupations	46.4	Caring children	
Administrative	17.9	Yes	18.8
Managers	15.2	No	81.2
Caring, leisure	5.4	Caring relatives	
Skills trade occupations	4.5	Yes	7
Sales	3.6	No	93
Technical occupations	2.6	Hobbies	
Elementary occupations	4.4	Yes	97
Financial status		No	3
Comfortably off	62.5	Voluntary job	
Enough money	34.8	Yes	51
Don't have enough means	2.7	No	49

Other sample characteristics can be seen in Table 1. An overview of the study measures and instrument performance is shown in Table 2.

Table 2. Mean, Standard Deviation, and Range for Study Measures

Variable	Mean* (SD)	Range	Possible	Cronbach's Alpha
Adjustment to retirement	10.55 (3.23)	3.00 - 14	3 - 15	.89
Satisfaction with retirement	12.99 (1.99)	6.67 - 15	4 - 15	.79
Avoidance (CSI)	15.41 (3.25)	11.00 - 24	0 - 33	.72
Problem solving (CSI)	19.67 (6.39)	11.00 - 33	0 - 33	.94
Rumination (aRRS)	8.70 (2.54)	4.88 - 18	5 - 20	.82
Suppression (CECS)	48.50 (11.08)	22.00 - 83	21 - 84	.94
Disability (WHODAS 2.0)	15.49 (4.22)	11.96 - 30	12 - 60	.79
Mental well-being	28.09 (4.31)	18.00 - 35	7 - 35	.89
Social support (MSPSS)	67.66 (11.18)	38.47 - 84	12 - 84	.92
Internal ageism (The Rame)	21.53 (8.01)	2.00 - 39	0 - 60	.88

*Note.* \* (Means from imputed data); For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. CSI = Coping Strategy Indicator; aRRS = adapted Ruminative Response Scale; CECS = The Cortauld Emotional Control Scale; WHODAS 2.0 = The World Health Organization Disability Assessment Schedule; WEMBS = Warwick-Edinburgh Mental Well-being Scale; MSPSS = Multidimensional Scale of Perceived Social Support.

## Results

### Data screening and Descriptive Results

Raw data were analysed using SPSS version 22, and significance was set at standard limits of  $p < .05$  (Cohen, 1992). All data was examined for data entry errors and missing data. Missing data ranged from 0.9% to 9.8% on some questionnaire items. Little's MCAR test (Little, 1988) was used to examine whether data were missing completely at random. The results indicated that data was missing completely at random for all measures except for the Disability Scale (WHODAS) and the subscale worry suppression, thus, the pattern of missing data for those two subscales was explored, and it was concluded that the missing data followed an arbitrary pattern. Expectation maximisation (Howell, 2007) was used to impute missing data as it has shown to be superior to deletion methods and mean or regression substitution (Schlomer, Bauman, & Card, 2010).

Thirty-eight percent of the retirees became accustomed to a nonworking life within a month, and forty-three percent had adjusted within a year. Only ten percent of the sample reported finding retirement adjustment very or quite difficult. Twenty-seven percent of retirees stated that retirement took quite some time “getting used to”, whereas nearly sixty percent disagreed with this statement. The vast majority of retirees (97%) felt “happy” or “quite happy” having retired. Among the respondents, 83% agreed with the statement, “Being retired/not working suits me very well”; 3% disagreed.

### **Correlations among Model Variables**

Before testing specific study hypotheses, bivariate correlations (Kendall’s tau)<sup>4</sup> were computed among the predictor variables and adjustment and satisfaction with retirement to assess multicollinearity and to guide variable selection for subsequent analyses (Table 3).

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<sup>4</sup> Kendall’s tau (non-parametric) was used rather than Spearman given that the data set contained a large number of tied ranks.

Table 3. *Descriptive Correlations for Adjustment to and Satisfaction with Retirement and Predictor Measures*

	Adjustment to Retirement	Satisfaction with Retirement
Age	-.086	-.121
Gender	-.044	.014
Education	-.119	-.139
Household status <sup>a</sup>	-.014	-.014
Type of job	.010	-.005
Length retirement	-.035	-.002
Financial situation	.197*	.262*
Avoidance (CSI)	-.375**	-.203**
Problem solving (CSI)	-.413**	-.060
Rumination (aRRS)	-.142*	-.192**
Suppression (CECS)	.008	.007
Disability (WHODAS 2.0)	-.054	-.143*
Mental well-being (WEMWBS)	.207**	.318**
Self-rated health	.088	.222**
Social support (MSPSS)	.046	.180**
Internal ageism (The Rame)	-.167*	-.231**
Adjustment to Retirement	1.00	.253**

*Note.* CSI = Coping Strategy Indicator; aRRS = adapted Ruminative Response Scale; CECS = The Cortauld Emotional Control Scale; WHODAS 2.0 = The World Health Organization Disability Assessment Schedule; WEMWBS = Warwick-Edinburgh Mental Well-being Scale; MSPSS = Multidimensional Scale of Perceived Social Support.

a (married or partnered vs single or widowed)

ns = not significant ( $p > .05$ ), \*  $p < .05$ , \*\*  $p < .01$

The main socio-demographical variables (age, gender, education, length of retirement) were not associated with adjustment to or satisfaction with retirement. They were dropped from further analysis. For purposes of interpretation, correlations .20 - .39 are considered “modest”, whereas correlations  $\geq .40$  - .60 are considered “large”. Consistent with prior research **adjustment with retirement** showed a modest relationship with financial status ( $r = .20$ ,  $p < .05$ ) and mental well-being ( $r = .21$ ,  $p < .001$ ). However, associations between

household status, type of job, and physical health were not found. Regarding ER strategies, problem solving was the strategy that showed the largest correlation with adjustment to retirement ( $r = -.41, p < .001$ ) followed by avoidance ( $r = -.37, p < .001$ ). Concretely, those retirees better adjusted reported to use less problem solving and avoidance to cope with retirement. Finally, lower scores in the ageism scale were associated with better adjustment to retirement ( $r = .17, p < .05$ ).

Satisfaction with retirement showed the largest correlation with mental well-being ( $r = .32, p < .001$ ) followed by financial situation ( $r = .26, p < .001$ ). Again, associations between satisfaction with retirement and household status and type of job were not found. Regarding ER strategies, avoidance was the strategy that showed the largest correlation ( $r = -.20, p < .001$ ) followed by rumination ( $r = -.19, p < .001$ ). Those retirees more satisfied with retirement used avoidance and rumination less. Attitudes to aging showed a modest relationship with satisfaction with retirement ( $r = -.23, p < .001$ ).

### **Hierarchical Multiple Regression Analyses**

A series of hierarchical multiple regression analyses (HMRAs) were conducted to examine the independent contributions of ER strategies and attitudes to aging to adjustment to and satisfaction with retirement. The following broad categories of explanatory variables were distinguished: Job-related variables (financial status, type of job) were entered at step 1, social related variables (marital status, social support) at step 3, mental and physical variables (mental well-being, disability, health perception) at step 4, adaptive ER strategies (problem-solving) at step 5; maladaptive ER strategies (avoidance, rumination, suppression) at step 6 and attitudes to aging at step 7. Sources of bias were explored. The Durbin-Watson statistic was checked for the assumption of independent errors. Tolerance and VIF values were



assessed to rule out multicollinearity. The values of Cook's distance, the average leverage, and the Mahalanobis distance were calculated to look for cases that might be influencing the regression model. Finally, a plot of residuals was created to check for violation of the assumption of homogeneity of variance, linearity, and normality. Table 4 summarises HMRA results for retirement adjustment.

Table 4. *Hierarchical Multiple Regression Analyses Predicting Adjustment to retirement*

Independent variables	b	SE B	$\beta$	p	R <sup>2</sup>	$\Delta R^2$
Step 1					.045	.045
Financial status	1.27	.56	.21	.026		
Occupation	.09	.15	.06	.565		
Step 2					.045	<.001
Household status <sup>a</sup>	-.08	.70	-.01	.908		
Social support	-.002	.03	-.01	.946		
Step 3					.119	.073*
Disability	.07	.10	.09	.485		
Mental well-being	.24	.09	.32	.007		
Self-rated health	.14	.40	.04	.721		
Step 4					.356	.237**
Problem solving	-.26	.04	-.52	<.001		
Step 5					.387	.031
Avoidance	-.13	.13	-.13	.300		
Suppression	.01	.03	.05	.55		
Rumination	-.19	.12	-.15	.105		
Step 6					.395	.008
Internal ageism	.06	.05	.15	.246		

Note. \* $p = .039$  for Step 3; \*\* $p < .001$  for Step 4

Traditional predictors of adjustment (wealth and health) accounted for 12 % of the total variance although only financial status and mental well-being were significant. However, no

significant effect was found for the importance of job prestige or type of occupation. The expected impact of social variables (household status, social support) was not confirmed. The hypothesis that maladaptive ER strategies such as avoidance, rumination and suppression will predict a more difficult adjustment was not found. However, problem-solving received the strongest weight in the model explaining 24% of the variance in adjustment. Interestingly, the relationship between adjustment and use of problem-solving went in the opposite direction to the originally predicted. The retirees who reported not having used problem-solving as a mechanism to cope with retirement were the most adjusted. Among, all variables, not using problem-solving was the strongest predictor of retirement adjustment. Finally, internal ageism did not predict adjustment to retirement. Table 5 presents the results for retirement satisfaction.

Table 5. *Hierarchical Multiple Regression Analyses Predicting Satisfaction with Retirement*

	<i>Independent variables</i>	<i>b</i>	<i>SE B</i>	$\beta$	<i>p</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$
Step 1							
	Financial status	1.08	.34	.29	.002	.086	.086*
	Occupation	.08	.09	.08	.394		
Step 2						.117	.031
	Household status <sup>a</sup>	.21	.42	.05	.615		
	Social support	.03	.02	.20	.058		
Step 3						.253	.136**
	Disability	.06	.06	.13	.284		
	Mental well-being	.13	.05	.29	.008		
	Self-rated health	.55	.23	.27	.019		
Step 4						.253	<.001
	Problem solving	.002	.03	.05	.957		
Step 5						.334	.080***
	Avoidance	-.08	.08	-.13	.345		
	Suppression	.03	.02	.18	.050		
	Rumination	-.22	.08	-.29	.005		
Step 6						.337	.003
	Internal ageism	-.02	.03	-0.09	.473		

Note. \**p* = .007 for Step 1; \*\**p* = .001 for Step 3; \*\*\**p* = .01 for Step 5;

Financial situation accounted for 9% of the total variance. A higher level of mental and perceived health were the strongest variables and accounted for an additional 14%. No significant effect was found for job prestige or social resources (i.e. household status, social support). In relationship to ER strategies, no association between problem-solving and satisfaction with retirement was observed. The use of maladaptive ER strategies (rumination) accounted for 8% of the total variance. Finally, satisfaction with retirement was not predicted by internal ageism.

## Discussion

The primary purpose of this study was to assess the role of ER strategies and ageism on adjustment and retirement satisfaction as well as to explore the impact of other contextual factors such as financial status, health, and social support. According to the HMRA analysis, a person tended to be better adjusted during retirement if he or she had greater household income, had good mental health and did not have the need to use problem-solving to cope with retirement. Regarding satisfaction, a retiree tended to experience higher retirement satisfaction if he or she had access to greater household income and had a high level of self-rated and mental health. However, retirees who reported high levels of rumination experienced lower retirement satisfaction.

The results of this study seem to indicate that retirement is not necessarily an adverse experience. Although retirement has been regarded as a stressful event that gives rise to a wide range of negative consequences such as physical illness, psychological distress or loss of social support (Dave, Rashad, & Spasojevic, 2008; Kim & Moen, 2002), British retirees in this study exhibited a positive psychological adjustment and satisfaction with retirement. These findings are consistent with previous research on American retirees (Reitzes & Mutran, 2004; Wang, 2007), German retirees (Pinquart & Schindler, 2007) and Hong Kong Chinese retirees (Yeung, 2013). In the sample studied, 87% of pensioners took voluntary retirement, and 91% stated that the timing was right. These two factors have been associated in the literature with greater levels of retirement adjustment and satisfaction (Reitzes & Mutran, 2004; Van Solinge and Henkens, 2008) and could have influenced a smooth transition to retirement in this group of retirees.

Contrary to our predictions, internal ageism was not a significant predictor of retirement adjustment. This finding could be related to the characteristics of the retirees interviewed, particularly with their high levels of mental well-being. Quinn et al., (2009) found that negative attitudes to aging were more prevalent in older people who had prior experience of mental illness or were attending mental health services. In fact, the group scores in our study indicated a very low level of ageism, even lower than the non-clinical population reported by Quinn et al., (2009). It would be interesting to explore what are the factors that have protected this group of older adults from ageist beliefs. Ninety-seven percent of the retirees reported having one or more hobbies and 51% were involved in voluntary job of different nature but involving connections with the community. It could be that the ageism antidote is the same as the “The Longevity Prescription”: (1) maintain mental vitality; (2) nurture your relationships [...], (6) live an active life (Butler, 2010, pp. 22, 57,138).

The resource-based dynamic model for retirement adjustment (Wang et al., 2011) proposes that the ease of retirement adjustment is the direct result of the individual’ access to the different type of resources: physical, cognitive, motivational, financial, emotional and social. Contrary to the findings by Leung and Earl (2012), no support was found for the influence of demographic and social factors in retirement adjustment or satisfaction. Similar to the results of Van Solinge and Henkes (2008), no significant effect was observed for the importance of job prestige. However, mental well-being played a role in explaining retirement adjustment and satisfaction. It is interesting to note though that mental health played a role in both retirement adjustment and satisfaction whereas self-perceived health predicted only satisfaction with retirement. Physical health decline has been related to lower levels of satisfaction with retirement (van Solinge & Henkens, 2008) and probably is a factor that will impact on other critical resources for retirement such as being able to engage socially or

being involved in leisure activities. Interestingly, levels of disability did not play a role in retirement adjustment or satisfaction. Some of the retirees interviewed scored up to 18 points in the WHODAS disability scale indicating a degree of significant impairment (Andrews et al., 2009). These results support the findings of a qualitative survey about pathways into retirement stating that what makes a difference in the well-being of retirees is the individual's perception of the availability of resources, not necessarily the actual quality of these (Kloep & Hendry, 2006). In fact, research has found that self-reported health appears to have a stronger association with psychological distress than physician-reported health and is possibly more significant as a predictor of overall physical well-being than more objective measures (Kosloski, Stull, Kercher, & Van Dussen, 2005; Ried & Planas, 2002).

The result of adjustment being inversely related to problem solving was quite unexpected. Several tentative explanations could be proposed. It is possible that the sample studied did not have to use problem solving because retirement was well planned in advance. Although planning alone may not be sufficient for ensuring well-being in retirement (Donaldson et al., 2010), psychological preparation activities, such as discussion of retirement issues with family members contribute positively to psychological well-being (Yeung, 2013). In fact, a recent review of retirement planning programs demonstrated that these interventions led to the development of leisure activities, encouraged the initiation and maintenance of physical activities and promoted increased knowledge about resources that would help to ensure a successful retirement (Leandro-França, Giardini Murta, Hershey, & Martins Barbosa, 2016). Unfortunately, no information was collected in this study about the exact nature of the planning activities undertaken before retirement, so this hypothesis cannot be empirically corroborated. The second explanation may be that, for the group of retirees in this study, retirement was never a problem, and in fact, some of the retirees confirmed this in their

responses (see Appendix H). In a qualitative interview study, Kloep and Hendry (2006), discussed how older people deal with retirement and identified three broad pathways into: “there is life beyond work,” “work as a lifestyle” and “there is not much left to live for.” The authors proposed that the difficulties that some retirees encounter did not stem from the retirement transition per se, but were the result of accumulated negative life-course experiences and events impinging on their development. Kloep and Hendry (2006), described “the life beyond work” group as those retirees who retired willingly, and often earlier than required, to have time to enjoy other activities. Interestingly, 40% of the retirees who participated in this study, retired before 60 years and 23% retired because they wanted to do other things. The authors proposed that these people had always been engaged in similar activities, and the foundations of successful coping in retirement may start much earlier in the life course.

The hypothesis that avoidance, rumination and suppression would have a negative effect on retirement satisfaction was confirmed only partially as only rumination predicted a lower level of satisfaction with retirement. However, rumination had a significant role in retirement satisfaction as it explained 8% of the variance alone. This proportion is only one point less than the variance explained by income, a variable that shows solid evidence predicting retirement satisfaction and adjustment (Wang & Shi, 2014). There is significant evidence about the negative impact of rumination on the mental well-being of older people (Thomsen, Mehlsen, Viidik, Sommerlund, & Zachariae, 2005; Ingersoll-Dayton, Torges, & Krause, 2010; Opdebeeck, Nelis, Quinn, & Clare, 2015), but this study is, to the author’s knowledge, the first one showing a negative effect of rumination on satisfaction with retirement. A potential explanation of why rumination can be so negative in retirement is that it prevents the retiree from building a personal range of psychosocial resources, for example being

involved in leisure activities, which are linked to more social contacts, and a greater perception of well-being. Supporting this hypothesis, Fernández-Fernández, Márquez-González, Losada-Baltar, and Romero-Moreno, (2014) found that rumination was inversely correlated with the frequency of leisure activities in a sample of healthy older adults recruited from senior centres. What is more, rumination can prevent the retiree from believing that she/he can do something pro-active instead of seeing her/himself as a passive victim. Kloeppel and Hendry (2006) proposed that self-agency is key in facing life's challenges and developing new resources during retirement. However, the authors emphasized that self-agency is not something one possesses, but something that one has to develop through hard work. As clearly stated by the oldest woman in that study (94 years): "Do not allow yourself to be left behind. You have to manage yourself; there is no one who asks about you [...]. One cannot give up and say that I am old".

## **Limitations and future research**

Our study has several limitations. The main limitation of the current study is the fact that the cross-sectional design of this study precludes us from drawing conclusions regarding the causal relationships among the investigated variables. That fact is particularly relevant in retirement studies as research showed that the findings in psychological well-being in retirement must be viewed in a longitudinal context (Wang et al., 2011).

Longitudinal studies have more power than cross-sectional studies when it comes to observing a certain event's temporal order. They also allow researchers the possibility of gaining information about intraindividual change and to learn more about cause and effect relationships and make connections in a clearer manner. The hypotheses could have been tested more robustly with a longitudinal design and a list-based sample, for example all



employees who will retire within the next six months in a big company being followed-up to measure. However, longitudinal studies are also associated with considerable practical obstacles including a significant longer time scale and the unavoidable attrition of participants meaning that the initial sample would have to be much larger. All this would have made a longitudinal study not feasible in the given timeframe.

Secondly, due the self-selected nature of the sample, the results can only be generalised to a group of retirees. Participants were predominantly a high functioning group of retirees, nearly half of them had a university education and professional occupation, and more than half reported to be economically comfortable. Also, the sample was not assessed for cognitive impairment, and thus, it is possible that participants with cognitive deficits could have misunderstood some items. To minimize this potential confounding variable we excluded all those participants who reported moderate or severe difficulties in The World Health Organization Disability Assessment Schedule (WHODAS 2.0; Andrews, Kemp, Sunderland, Von Korff, & Ustun, 2009).

Furthermore, ER is a complex construct and participants' self-report of how much they use an emotion regulation strategy may differ. In fact, age-related discrepancies between self-reported ER and the effect on actual emotional responding have been highlighted in experimental studies including older adults (Shiota & Levenson, 2009). Finally, we prioritized the presentation and discussion of multiple stepwise regression, a method which has been successful applied to a similar set of questions (Leung & Earl, 2012). We realise however, that this method has its weaknesses, in particular the arbitrary character behind the

selection of the specific hierarchical order of predictor variable and the potential problem of multicollinearity (Petrocelli, 2003).

This study is the first research investigating the role of ER strategies on adjustment and satisfaction with retirement. Future research could benefit from investigating a more representative selection of retirees, including those affected by lack of resources, isolation, economic deprivation or poor health. Those people will be more difficult to reach and might be less willing to participate in research. In addition, as Gross proposed in his process model of emotion regulation (Gross 1998a, 1998b), people have a toolbox of emotion regulation strategies they use to modify their affect and/or the situations eliciting such affect. The latest research in emotion regulation emphasizes the importance of the context and the ability to flexibly regulate emotions in line with situational demands (Bonanno, Papa, Lalande, Westphal, & Coifman, 2004; Aldao & Nolen-Hoeksema, 2013). Given the normal fluctuation of resources during retirement and old age, it would be relevant to understand the differential use of ER strategies according to the variation of resources such as health or social support. Longitudinal studies and methods of analysis that could investigate the interplay of the different ER on the adjustment and satisfaction with retirement such as a path or structural equation model could add further knowledge about successful mechanisms for retirement in the twenty-first century.

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## **Appendix A: Author guidelines for Clinical Psychology Review**

### **Declaration of interest**

All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, their work.

### **Submission declaration and verification**

Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see 'Multiple, redundant or concurrent publication' section of our ethics policy for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service.

### **Changes to authorship**

Authors are expected to consider carefully the list and order of authors **before** submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list

should be made only **before** the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the **corresponding author**: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed. Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

### **Author Disclosure Policy**

Authors must provide three mandatory and one optional author disclosure statements. These statements should be submitted as one separate document and not included as part of the manuscript. Author disclosures will be automatically incorporated into the PDF builder of the online submission system. They will appear in the journal article if the manuscript is accepted.

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12. Are the conclusions drawn from the data?	<p>√ (2 points) = Yes.</p> <p>X (0 points)= No.</p>

## Appendix C: Ethical approval correspondence



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The University of Edinburgh  
Medical School  
Doorway 6, Teviot Place  
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Telephone: 0131 651 3909  
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Email: [ethics@clinical.ac.uk](mailto:ethics@clinical.ac.uk)

Blanca Ramirez-Ruiz  
Specialist Psychological Practitioner  
Lynebank Hospital  
Halbeath Road  
Dunfermline  
KY11 4UW

17 March 2015

Dear Blanca,

### Application for Level 1 Ethical Approval

**Project Title:** What Makes a Good Retirement?

**Academic Supervisor:** Nuno Ferreira

Thank you for submitting the above research project for review by the Department of Clinical and Health Psychology Ethics Research Panel. I can confirm that the submission has been independently reviewed and was approved on the 18<sup>th</sup> February 2015.

Should there be any change to the research protocol it is important that you alert us to this as this may necessitate further review.

Yours sincerely,

Kirsty Gardner  
Administrator  
Clinical Psychology



## Appendix D: Cover letter

NHS Fife Community Services  
Psychology Services

**NHS FIFE  
PSYCHOLOGY DEPARTMENT**  
Lynebank Hospital  
Halbeath Road  
Dunfermline  
Fife KY11 4UW  
[www.nhsfife.org](http://www.nhsfife.org)  
[www.moodcafe.co.uk](http://www.moodcafe.co.uk)



08<sup>th</sup> May 2015

Study title: *What makes a good retirement?*

Dear Participant,

Thank you for your interest in the above study. My name is Blanca. I am a Trainee Clinical Psychologist at the University of Edinburgh based at the Department of Clinical Psychology, NHS Fife. I am conducting a research study as part of the Doctorate in Clinical Psychology. I am interested to learn more about the impact of how we deal with our emotions and our attitudes towards getting older and our wellbeing at retirement.

Because you define yourself as a retired person and you are not in paid job I would like to invite you to participate in this research study by completing the attached survey. Before you decide whether you want to take part, please read the enclosed participant information sheet. If you require additional information please contact me at the numbers listed below.

If you choose to participate in this project, please answer all questions as honestly as possible and return the completed questionnaires and the consent form promptly in the **provided stamped** envelope. Completion and return of the questionnaire will indicate your willingness to participate in this study. Participation is strictly voluntary and you may refuse to participate or withdraw from this study at any time.

Thank you for taking the time to participate. The data collected will provide useful information regarding adjustment and satisfaction with retirement. If you would like a summary of the results at the end of data collection for this study please complete and tear off the Request for Information Form and return it to me in the same envelope

Sincerely,  
Blanca Ramirez-Ruiz  
[Blanca.ramirez-ruiz@nhs.net](mailto:Blanca.ramirez-ruiz@nhs.net)  
01383 56 54 03  
07805 95 66 69



### Request for Information Form

Please send a copy of the study results to the address listed below.

Name:

Address:

**Please return this form with your survey.**

## Appendix E: Participant information sheet



### **PARTICIPANT INFORMATION SHEET**

Title of the Project: ***What makes a good retirement?***

You are being invited to participate in a research project about wellbeing in retirement. You should only participate if you want to; choosing not to take part will not disadvantage you in any way.

Before you decide whether you want to take part, it is important for you to read the following information carefully and discuss it with others if you wish. Please contact the researcher if there is anything that is not clear or you would like more information.

This study is being conducted as a part of an academic qualification (Doctorate in Clinical Psychology).

#### **What is the purpose of the study?**

Retirement is a significant transition in adulthood. The study investigates the impact of how we deal with our emotions and our attitudes towards getting older and our wellbeing at retirement.

#### **Taking part in the project**

The research project involves completing some questionnaires. It takes between 20-30 minutes to complete them all. The researcher's contact details will be in the questionnaire booklet and you could contact her for any help needed completing the questionnaires. After completing the questionnaires you will not be contacted by other researchers.

It is up to you to decide whether or not to take part. If you decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

#### **What if I have questions or concerns?**

If you have any questions or concerns about any aspect of the study, you should speak to the investigator who will do her best to answer your questions (Tel: 01383 565 403/07805 95 66 69 or write to Blanca Ramirez-Ruiz, Clinical Psychology Dept, Lynebank Hospital, Dunfermline, KY11 4UW). If you prefer to speak to someone independent of the study, please contact Miss Tara Graham, Research and

## Appendix E: Participant information sheet (continuation)



Development Psychologist by phone on (01334) 696218 or write to Miss Tara Graham, Clinical Psychology Department, Stratheden Hospital, Cupar, Fife, KY15 5RR.

### **Will my taking part in this study be kept confidential?**

All information which is collected during the course of the study will be kept strictly confidential and any information which could identify you will be replaced with a participant information number to anonymise it. The completed questionnaires and the consent forms will be kept in NHS premises.

All personal information will be treated in line with NHS Fife policies regarding confidentiality and data protection, as well as the British Psychological Society Code of Conduct.

### **What will happen to the results of the study?**

All identifiable data collected will be stored securely and anonymised before being analysed. The data will be entered into a database on a password protected NHS computer, which is based on NHS premises, within NHS-IT security system. The anonymised results of the study will be written up as part of an academic project and submitted as part of the University of Edinburgh Doctorate of Clinical Psychology training course requirements.

### **Who is organising and funding the study?**

This study is a Doctorate of Clinical Psychology student project organised by the University of Edinburgh. This study has been subject to Ethical Review Assessment by the School of Health and Social Sciences -University of Edinburgh

*Hopefully, this information sheet has answered your questions about the project.*

**Thank you for taking the time to read this information sheet.**

### **Name, Address and Contact Details of Investigators:**

Blanca Ramirez Ruiz,  
Clinical Psychology Department, Lynebank Hospital Dunfermline KY11 4UW.  
blanca.ramirez-ruiz@nhs.net  
Telephone: 01383 565 403 / 07805956669



## Appendix F: Consent form




### CONSENT FORM

Title of the Project: ***What makes a good retirement?***

Name of the Researcher: **Blanca Ramirez-Ruiz**

Participant Identification Number: \_\_\_\_\_

Please initial		
I confirm that I have read and understood the information sheet dated 07/01/15 version 1 for the above study. I have had the opportunity to consider the information, ask the questions and have had these answered satisfactorily.		
I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving any reason.		
I understand that relevant anonymised data collected during this study may be shared with supervisors from the School of Health in Social Sciences at the University of Edinburgh or clinical staff from NHS Fife. I give permission for these individuals to view my data. I understand that this data will not identify me as an individual.		
I agree to take part in the above study		
I understand that the findings of this study will form part of an academic project for the University of Edinburgh Doctorate in Clinical Psychology training course, and may be published. I understand that I will not be identified as an individual in such a publication.		
Name of participant	Date:	Signature
Name of researcher Blanca Ramirez-Ruiz	Date:	Signature 

## Appendix G: Demographic questionnaire for participants



THE UNIVERSITY of EDINBURGH

# What makes a good retirement? Questionnaire Pack



*Your name:*

*Participant ID  
(for coding purposes):*

## Appendix G: Demographic questionnaire for participants (continuation)

We are interested to study the factors that have an influence in the quality of life of retired people. Thank you very much for helping to understand better this important transition in a person's life.

### About you

Your gender:

☐ Male    ☐ Female

Date of birth \_\_\_\_\_

Do you perceive yourself as retired?

☐ Yes    ☐ No

Education: Level of highest education you have successfully completed (please tick all that apply):

☐ Primary school                      ☐ College diploma  
☐ High school                            ☐ University degree  
☐ Technical certificate

If other, please give details:

\_\_\_\_\_

**Marital status**

☐ Married                      ☐ Divorced/Separated (not currently partnered)  
☐ Single (never married)    ☐ Partnered (other than married)  
☐ Widowed

What was your last occupation for which you got paid? Please give the full title, e.g. accountant, clerk, clothing machine operator

\_\_\_\_\_

Which year did you start working for this employer/company

Which year did you stop working for this employer/company?

## Appendix G: Demographic questionnaire for participants (continuation)

**Was this the main job you had in your life?**

☐ Yes    ☐ No

**How many jobs have you had in your life? Please give the full titles**

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**What reasons did you have for retiring? Please tick the ones relevant to you.**

- ☐ Eligible for Age Pension
- ☐ Enough income to retire
- ☐ Offered an early retirement package
- ☐ Made redundant or dismissed
- ☐ Pressure from employer or others at work to retire
- ☐ Could not find alternative work
- ☐ Did not like my work
- ☐ Wanted to do other things
- ☐ Wanted to spend more time with family
- ☐ Spouse/partner retired or about to retire
- ☐ Pressure from spouse/partner to retire
- ☐ Poor health
- ☐ Spouse/partner had poor health
- ☐ Parents or other family had poor health
- ☐ Doctor suggested I retire
- ☐ Other (please specify

---

**Was your decision to retire entirely voluntary?**

☐ Yes    ☐ No

**How much say did you have in the timing of your retirement?**

- ☐ Completely say
- ☐ Little say
- ☐ A lot of say
- ☐ Not say at all

## Appendix G: Demographic questionnaire for participants (continuation)

**Compared with most people you know, would you say you have retired?**

- ☐ Too early
- ☐ About right
- ☐ Too late

**Do you receive any income from the state or a private pension?**

- ☐ Yes
- ☐ No

**Which year did you start drawing your pension?** \_\_\_\_\_

**Thinking about your money situation, would you say (please tick the box that best describes your situation)**

- I don't have enough money to make ends meet ☐
- I have just enough money ☐
- I am comfortably off ☐

**Transition to retirement. Please tick the appropriate box**

- ☐ I stopped my main job and since then I have not had any paid employment
- ☐ I retired gradually from my main job, decreasing the numbers of hours
- ☐ I left my main job and I moved full time in a different job then I retired
- ☐ I left my main job and I moved part-time in a different job then I retired
- ☐ I moved from disability benefits to retirement
- ☐ I moved from unemployment benefits to retirement
- ☐ I moved from other income support to retirement
- ☐ If other, please give details:

\_\_\_\_\_  
**Do you have the main responsibility in caring for someone who has a long-term illness, disability or other problem?**

- ☐ Yes
- ☐ No

**If so, who do you care for?**

\_\_\_\_\_  
**Do you look after children aged 12 or under (who do not live with you) on regular basis?**

- ☐ Yes
- ☐ No



## Appendix G: Demographic questionnaire for participants (continuation)

**CURRENTLY, do you do any voluntary or unpaid community work on a regular basis? If yes, please specify**

☐ Yes      ☐ No

---

---

**If you do voluntary work, how many hours do you usually work in an average a week?**

---

**Do you have any hobbies or activities in which you like spend your free time? If yes, please specify which ones**

☐ Yes      ☐ No

---

---

## Appendix H: Adjustment and satisfaction with retirement scale

### **About your retirement**

**Please read the statements below and tick the option, which best describes your experience**

**How long did it take you to get used to retirement?**

- ☐ Less than 1 month
- ☐ Between 1 and 6 months
- ☐ Between 6 months and 1 year
- ☐ More than 1 year
- ☐ I have not got used to retirement yet

**How difficult has it been for you to adjust to retirement?**

- ☐ Very difficult
- ☐ Quite difficult
- ☐ Neither difficult nor easy
- ☐ Not very difficult
- ☐ Not difficult at all

**"It took some time to get used to retirement for me."**

- ☐ Completely agree
- ☐ Agree
- ☐ Agree nor disagree
- ☐ Disagree
- ☐ Completely disagree

**How are you enjoying your retirement?**

- ☐ Better than expected
- ☐ As expected
- ☐ I am not enjoying it as much as I thought I would

## Appendix H: Adjustment and satisfaction with retirement scale

### **About your retirement**

**Please read the statements below and tick the option, which best describes your experience**

**How long did it take you to get used to retirement?**

- ☐ Less than 1 month
- ☐ Between 1 and 6 months
- ☐ Between 6 months and 1 year
- ☐ More than 1 year
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**How difficult has it been for you to adjust to retirement?**

- ☐ Very difficult
- ☐ Quite difficult
- ☐ Neither difficult nor easy
- ☐ Not very difficult
- ☐ Not difficult at all

**"It took some time to get used to retirement for me."**

- ☐ Completely agree
- ☐ Agree
- ☐ Agree nor disagree
- ☐ Disagree
- ☐ Completely disagree

**How are you enjoying your retirement?**

- ☐ Better than expected
- ☐ As expected
- ☐ I am not enjoying it as much as I thought I would

## Appendix I: Correspondence from participants

### Your ways of coping with retirement

We are interested in how people cope with retirement. Listed below are several possible ways of coping. We would like you to indicate to what extent you, yourself, used each of these coping methods. For each question, please circle only one response. Answer each and every question even though some may sound similar.

**Keeping coping with retirement in mind, indicate to what extent you ...**

Rearranged things so your problem could be solved (i.e. you could cope well /successfully with retirement)	Moved house away from the beach. A lot	A little	Not at all
Thought of many ideas before deciding what to do	A lot	A little	Not at all
Tried to distract yourself from the problem (i.e. you are not actively working anymore) <i>It wasn't a problem, just different</i>	A lot	A little	Not at all
Did all you could to keep others from seeing how bad things really were	A lot	A little	Not at all
Set some goals for yourself to deal with the situation (i.e. not being actively working anymore)	A lot	A little	Not at all
Weighed up your options carefully	A lot	A little	Not at all
Daydreamed about better times	A lot	A little	Not at all

## Appendix I: Correspondence from participants (continuation)

### Your ways of coping with retirement

We are interested in how people cope with retirement. Listed below are several possible ways of coping. We would like you to indicate to what extent you, yourself, used each of these coping methods. For each question, please circle only one response. Answer each and every question even though some may sound similar.

**Keeping coping with retirement in mind**, indicate to what extent you ...

Rearranged things <sup>for new lifestyle</sup> so your problem could be solved (i.e. you could cope well /successfully with retirement)	A lot	<u>A little</u>	Not at all
Thought of many ideas before deciding what to do	A lot	<u>A little</u>	Not at all
Tried to distract yourself from the problem (i.e. you are not actively working anymore)	A lot	A little	<u>Not at all</u>
Did all you could to keep others from seeing how bad things really were	A lot	A little	<u>Not at all</u>
Set some goals for yourself to deal with the situation (i.e. not being actively working anymore)	A lot	A little	<u>Not at all</u>
Weighed up your options carefully	A lot	A little	Not at all
Daydreamed about better times	A lot	A little	<u>Not at all</u>

Difficult to understand what you mean by this page. It seems to assume retirement is

V2. 09/05/15

Page 10

a problem — it is not!!

## Appendix I: Correspondence from participants (continuation)

Project: What makes a good retirement

I have completed your study questionnaire with great interest. I found it generally comprehensive but a little unbalanced.

Two comments

Firstly I believe that the use of the word 'coping' in relation to retirement has strong negative connotations and implies that once one has retired one is, by nature of one's age, having to COPE rather than LIVE for the rest of one's life. I refer in particular to pages 10 and 11. I would suggest that by asking questions this way you may be in dangers of skewing the responses.

Secondly in the Your Emotions section all the emotions you ask about are negative ones, nowhere do you give the opportunity to indicate how any positive emotions such as happiness, pleasure or enjoyment are dealt with.

## **Appendix J: Guidelines for Psychology and Aging**

Prior to submission, please carefully read and follow the submission guidelines detailed below. Manuscripts that do not conform to the submission guidelines may be returned without review.

### **Submission**

Submit manuscripts electronically through the Manuscript Submission Portal (.rtf, .doc, or .pdf files)

Ulrich Mayr

Department of Psychology

University of Oregon

Eugene, OR

General correspondence may be directed to the Editor's Office.

In addition to addresses and phone numbers, please supply email addresses and fax numbers, if available, for potential use by the editorial office and later by the production office.

*Psychology and Aging*<sup>®</sup> is now using a software system to screen submitted content for similarity with other published content. The system compares the initial version of each submitted manuscript against a database of 40+ million scholarly documents, as well as content appearing on the open web. This allows APA to check submissions for potential overlap with material previously published in scholarly journals (e.g., lifted or republished material).

## **Masked Review Policy**

Masked reviews are optional, and authors who wish masked reviews must specifically request them at submission. Authors requesting masked review should make every effort to see that the manuscript itself contains no clues to their identities. Authors' names, affiliations, and contact information should be included only in the cover letter.

If your manuscript was mask reviewed, please ensure that the final version for production includes a byline and full author note for typesetting.

## **Length**

Manuscripts should not exceed 8,000 words (approximately 27 double-spaced pages in 12-point Times New Roman font). Shorter manuscripts are equally welcomed.

The word count does not include references, tables, and figures. If you feel that you need extra space, please contact the editor. For example, you may have a complex methodology or statistical approach or a new theoretical framework that requires more text.

Please include the word count for the main text below the keywords.

## **Brief Reports**

The Brief Report format is designated for particularly "crisp," theoretically noteworthy contributions that meet highest methodological standards. Use 12-point Times New Roman type and 1-inch (2.54-cm) margins; include an abstract of 75–100 words; do not exceed 265



lines of text, not including references; and typically include no more than two tables or figures.

## **Manuscript Preparation**

Prepare manuscripts according to the *Publication Manual of the American Psychological Association* (6<sup>th</sup> edition). Manuscripts may be copyedited for bias-free language (see Chapter 3 of the *Publication Manual*).

Review APA's [Checklist for Manuscript Submission](#) before submitting your article.

Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the *Manual*. Additional guidance on APA Style is available on the [APA Style website](#).

Below are additional instructions regarding the preparation of display equations, computer code, and tables.

## **Display Equations**

We strongly encourage you to use MathType (third-party software) or Equation Editor 3.0 (built into pre-2007 versions of Word) to construct your equations, rather than the equation support that is built into Word 2007 and Word 2010. Equations composed with the built-in Word 2007/Word 2010 equation support are converted to low-resolution graphics when they enter the production process and must be rekeyed by the typesetter, which may introduce errors.

To construct your equations with MathType or Equation Editor 3.0:

- Go to the Text section of the Insert tab and select Object.
- Select MathType or Equation Editor 3.0 in the drop-down menu.

If you have an equation that has already been produced using Microsoft Word 2007 or 2010 and you have access to the full version of MathType 6.5 or later, you can convert this equation to MathType by clicking on MathType Insert Equation. Copy the equation from Microsoft Word and paste it into the MathType box. Verify that your equation is correct, click File, and then click Update. Your equation has now been inserted into your Word file as a MathType Equation. Use Equation Editor 3.0 or MathType only for equations or for formulas that cannot be produced as Word text using the Times or Symbol font.

### **Computer Code**

Because altering computer code in any way (e.g., indents, line spacing, line breaks, page breaks) during the typesetting process could alter its meaning, we treat computer code differently from the rest of your article in our production process. To that end, we request separate files for computer code.

### **In Online Supplemental Material**

We request that runnable source code be included as supplemental material to the article. For more information, visit [Supplementing Your Article with Online Material](#).

### **In the Text of the Article**

If you would like to include code in the text of your published manuscript, please submit a separate file with your code exactly as you want it to appear, using Courier New font with a

type size of 8 points. We will make an image of each segment of code in your article that exceeds 40 characters in length. (Shorter snippets of code that appear in text will be typeset in Courier New and run in with the rest of the text.) If an appendix contains a mix of code and explanatory text, please submit a file that contains the entire appendix, with the code keyed in 8-point Courier New.

## **Tables**

Use Word's Insert Table function when you create tables. Using spaces or tabs in your table will create problems when the table is typeset and may result in errors.

## **Submitting Supplemental Materials**

APA can place supplemental materials online, available via the published article in the PsycARTICLES® database. Please see [Supplementing Your Article with Online Material](#) for more details.

## **Abstract and Keywords**

All manuscripts must include an abstract containing a maximum of 250 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.

## References

List references in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References section.

Examples of basic reference formats:

### *Journal Article:*

Hughes, G., Desantis, A., & Waszak, F. (2013). Mechanisms of intentional binding and sensory attenuation: The role of temporal prediction, temporal control, identity prediction, and motor prediction. *Psychological Bulletin*, 139, 133–151.

<http://dx.doi.org/10.1037/a0028566>

### *Authored Book:*

Rogers, T. T., & McClelland, J. L. (2004). *Semantic cognition: A parallel distributed processing approach*. Cambridge, MA: MIT Press.

### *Chapter in an Edited Book:*

Gill, M. J., & Sypher, B. D. (2009). Workplace incivility and organizational trust. In P. Lutgen-Sandvik & B. D. Sypher (Eds.), *Destructive organizational communication: Processes, consequences, and constructive ways of organizing* (pp. 53–73). New York, NY: Taylor & Francis.

## Figures

Graphics files are welcome if supplied as Tiff or EPS files. Multipanel figures (i.e., figures with parts labelled a, b, c, d, etc.) should be assembled into one file.

The minimum line weight for line art is 0.5 point for optimal printing.

For more information about acceptable resolutions, fonts, sizing, and other figure issues, [please see the general guidelines](#).

When possible, please place symbol legends below the figure instead of to the side.

APA offers authors the option to publish their figures online in color without the costs associated with print publication of color figures.

The same caption will appear on both the online (color) and print (black and white) versions. To ensure that the figure can be understood in both formats, authors should add alternative wording (e.g., "the red (dark gray) bars represent") as needed.

For authors who prefer their figures to be published in color both in print and online, original color figures can be printed in color at the editor's and publisher's discretion provided the author agrees to pay:

- \$900 for one figure
- An additional \$600 for the second figure
- An additional \$450 for each subsequent figure

## **Permissions**

Authors of accepted papers must obtain and provide to the editor on final acceptance all necessary permissions to reproduce in print and electronic form any copyrighted work, including test materials (or portions thereof), photographs, and other graphic images (including those used as stimuli in experiments). On advice of counsel, APA may decline to publish any image whose copyright status is unknown.

## Publication Policies

APA policy prohibits an author from submitting the same manuscript for concurrent consideration by two or more publications. See also [APA Journals<sup>®</sup> Internet Posting Guidelines](#).

APA requires authors to reveal any possible conflict of interest in the conduct and reporting of research (e.g., financial interests in a test or procedure, funding by pharmaceutical companies for drug research).

In light of changing patterns of scientific knowledge dissemination, APA requires authors to provide information on prior dissemination of the data and narrative interpretations of the data/research appearing in the manuscript (e.g., if some or all were presented at a conference or meeting, posted on a listserv, shared on a website, including academic social networks like ResearchGate, etc.). This information (2–4 sentences) must be provided as part of the Author Note.

Authors of accepted manuscripts are required to transfer the copyright to APA.

- For manuscripts **not** funded by the Wellcome Trust or the Research Councils UK [Publication Rights \(Copyright Transfer\) Form \(PDF, 83KB\)](#)
- For manuscripts funded by the Wellcome Trust or the Research Councils UK [Wellcome Trust or Research Councils UK Publication Rights Form \(PDF, 34KB\)](#)

## **Ethical Principles**

It is a violation of APA Ethical Principles to publish "as original data, data that have been previously published" (Standard 8.13).

In addition, APA Ethical Principles specify that "after research results are published, psychologists do not withhold the data on which their conclusions are based from other competent professionals who seek to verify the substantive claims through reanalysis and who intend to use such data only for that purpose, provided that the confidentiality of the participants can be protected and unless legal rights concerning proprietary data preclude their release" (Standard 8.14).

APA expects authors to adhere to these standards. Specifically, APA expects authors to have their data available throughout the editorial review process and for at least 5 years after the date of publication.

Authors are required to state in writing that they have complied with APA ethical standards in the treatment of their sample, human or animal, or to describe the details of treatment. Download [Certification of Compliance With APA Ethical Principles Form \(PDF, 26KB\)](#). The APA Ethics Office provides the full [Ethical Principles of Psychologists and Code of Conduct](#) electronically on its website in HTML, PDF, and Word format. You may also request a copy by [emailing](#) or calling the APA Ethics Office (202-336-5930). You may also read "Ethical Principles," December 1992, *American Psychologist*, Vol. 47, pp. 1597–1611

## Appendix K: Combined References of the Full thesis

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